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REVIEWS

A Collection of Geological Facts and Practical Observations, intended to elucidate the Formation of the Ashby Coal Field. By Edward Mammatt, Esq., F.G.S. 4to. London: Lawford.

Mr. Mammatt is one of those valuable pioneers in science who furnish the materials from which the theoretical philosopher constructs his systems, and, by a few dashes of his pen, depicts the plan upon which the world, and all that therein is, have been created. Perfectly aware of the errors and absurdities into which those have fallen in the field of Geology, who have reasoned from partial views, and ill-understood phenomena, and anxious to contribute his share to the stock of positive knowledge, which, in that science, is still so great a desideratum, he has availed himself of his opportunities as a manager of the coal mines of the Marquis of Hastings, to collect a large mass of valuable practical information concerning the mineral and fossil remains of that part of the coal measures which he has had beneath his view.

It is, especially, to those who are engaged in mining speculations that the work is addressed; and, consequently, while it contains numerous details of the practical management of mines, as well as an explanation of points which the geologist will chiefly appreciate, its main object is to show how the latter may really be made to conduce to the benefit of the former.

"It is remarkable (Mr. Mammatt observes) in the history of Geological theory, that so few writers have given details of the observations upon which the conclusions are founded. This is one reason why few works of the kind have practically benefited the miner. Whilst some jumble together the strata of a district, others, rambling through kingdoms, extend their theories all over the globe.—Hitherto, so great has been the inutility of many valued writings on the subject, that they are seldom read by practical miners, who, knowing that the chief inferences were drawn from wrong premises, are disinclined from paying attention even to such facts as have been partially collected."

Now, that Mr. Mammatt has given his observations publicity, this reproach will no longer attach to Geology. He has treated the subject in every way of which it appears susceptible; but he has more especially insisted upon the importance to miners of a knowledge of the fossil remains by which the different coal strata are characterized, and as many as one hundred and two quarto lithographic plates, neatly coloured, are devoted to the illustration of this point. The knowledge of the fact, that each layer or stratum has its own peculiar fossil, has been of the greatest practical use in the Ashby coal-field; and, "although the generality of its application, as a principle, has been doubted, if not denied, yet since it holds good for some miles, it must be of extreme importance to the miner."

We find among the subjects which have more especially engaged the author's attention, numerous details concerning the evolution of carburetted hydrogen gas, and its management. He seems to think that this fatal exhalation, by which so many hundreds of lives have been unhappily lost, might be made useful to the miners, and he mentions an instance in the Ashby mines where that object might have been attained with a suitable apparatus. If this really were practicable, it would certainly be one of the greatest triumphs of man over nature.

Mr. Mammatt considers that the faults in mines are not produced, as they are generally supposed to be, by volcanic convulsions, but that "if the process of desiccation, compression, and induration, be strictly investigated, it will explain the phenomena of slips in all their modifications throughout the Ashby coal-field. They extend to a depth altogether beyond our reach;—the deepest mines in the earth from their continuation downwards, and, on the surface, they are traced for miles. In like manner also the same process may account, not only for the small slips and dislocations, but for all tilts and declinations of strata. It will even account for the vertical position of entire masses, for the position of masses reversed for short distances, and for the sudden depressions of surface both in mountainous districts, and on the sea-shore, where the depths of the sea are generally proportioned to the height of the strata lying with their beds nearly vertical."

With regard to the inferences which are deducible from the observation of the fossils of the coal measures, Mr. Mammatt concludes, first, that the period of their existence must have been very remote, and vast denudations must have since taken place, by which the overlying masses, known to be formations over the coal (the abraded and broken edges of which bring the remains and proofs of such denudations), now border the coal district; secondly, that the present theories, so laboriously constructed, *are totally inadequate to explain the origin of these formations;* and that further diligent research, astronomically and otherwise, will bring to view more rational conclusions as to the causes of these phenomena. Upon this point the author is entirely at issue with Mr. Lyell and his school, who, notwithstanding the strongest evidence to the contrary, insist that geological appearances are owing to the action of causes still in operation. One would think that the tremendous escarpments of the Ghauts of India might alone convince them of the hopelessness of their case, without having recourse to the equally conclusive, but less obvious proofs deducible from the remains buried in the coal strata.

To analyze the contents of such a work as this, would far surpass our limits; in what manner the subject is treated is already apparent from the extracts we have given. It is, therefore, only necessary to add, that we regard it as one of the most important contributions to Geology which the present age, fertile as it is in valuable observations, has produced. The measurements of the sections of strata, the map of the country round Ashby de la Zouch, in which this coal-field is situated, and the profiles of the principal seams, all have the marks of extreme accuracy. If we were to make any observations in blame, where there is so much to praise, we should say, the manner in which the lithographic plates of fossils has been executed is unworthy the beautiful execution of the remainder of the work.

Wanderings in New South Wales, Batavia, Pedir Coast, Singapore, and China; being the Journal of a Naturalist in those Countries, during 1832, 1833, *and* 1834. By George Bennett, Esq. F.L.S. M.R.C.S. &c. 2 vols. 8vo. London: Bentley.

Mr. Bennett is not altogether unknown to the readers of the *Athenæum*. It was to him we were indebted for the 'Notes on New Zealand,' which appeared in this journal in the years 1831-2. He has since then been a far voyager, and the work before us is the result. In a modest preface, he states, that he has "limited himself principally, if not entirely, to the notes taken at the instant of observation, his object being to relate facts in the order they occurred, and, without regard to studied composition, to impart the information he has been enabled to collect in simple and unadorned language, avoiding as much as possible the technicalities of science." This is well; but it relates to the mere form, and not to the substance of the work. The first and most important consideration was and is the value of the information collected; and here we felt at once that Mr. Bennett came before us at a disadvantage. So many excellent works have been lately published on New South Wales,—we may refer particularly to those of Dr. Lang and Captain Sturt,—that little of novelty and interest remained to be gleaned by any mere visitor, however observant, in wanderings on horseback from location to location. We confine our observations, because we mean to confine our extracts, for the present, to the first volume. The subsequent visits to the coast of China, &c. will form a separate review. Mr. Bennett, notwithstanding, has contrived to make a pleasant narrative of his voyaging and journeyings, and we have found many passages worth transferring to our paper. On arriving in the tropical regions, he makes some observations on flying-fish, the habits of which he appears to have watched attentively.

"I have never (he observes,) yet been able to see any percussion of the pectoral fins during flight, although such a high authority as Cuvier says, 'the animal beats the air during the leap, that is, it alternately expands and closes its pectoral fins;' and Dr. Abel also supports this opinion, and says that it agrees with his experience; he has repeatedly seen the motion of the fins during flight, and as flight is only

'swimming in air,' it appears natural that those organs should be used in the same manner in both elements. But the structure of a fin is not that of a wing; the pectoral fins or wings of the flying fish are simply enlarged fins, capable of supporting, perhaps, but not of propelling the animal in its flight.

"In fish, the organ of motion for propelling them through the water is the tail, and the fins direct their course; in birds, on the contrary, the wings are the organs of motion, and the tail the rudder. The only use of the extended pectoral fins in the fish is for the purpose of supporting the animal in the air, like a parachute, after it has leaped from the water by some power, which is possessed by fish of much larger size, even the whale. * * *

"The greatest length of time that I have seen these *volatile* fish on the *fin*, has been thirty seconds by the watch, and their longest flight, mentioned by Captain Hall, has been two hundred yards; but he thinks that subsequent observation has extended the space. The most usual height of flight, as seen above the surface of the water, is from two to three feet; but I have known them come on board at a height of fourteen feet and upwards; and they have been well-ascertained to come into the channels of a line of battle ship, which is considered as high as twenty feet and upwards.

"But it must not be supposed they have the power of elevating themselves in the air, after having left their native element; for on watching them I have often seen them fall much below the elevation at which they first rose from the water, but never in any one instance could I observe them raise themselves from the height at which they first sprang, for I regard the elevation they take to depend on the power of the first spring or leap they make on leaving their native element."

We shall now proceed at once to New South Wales; and Mr. Bennett confirms the general report, that though subject to skyey influences, it is on the whole a very flourishing colony; and his opinion is entitled to the more weight because he has no personal interest to bias his judgment.

"On making a circuit around the town of Sydney, the metropolis of the Australian colony, the extent of ground it occupies, the number of buildings completed, as well as those erecting for the increased and still increasing population, the variety and neatness of the shops, excite the surprise of a stranger, and still more of a person who revisits the town after a brief absence, at the rapid improvements that have taken place in this distant colony in so short a period of time. The humble wooden dwellings are fast giving place to neat houses and cottages constructed of brick or sand-stone; but, as may be expected in all recently established towns, there is much want of symmetry in the construction of the buildings; and on perambulating the streets, specimens of several unknown orders of architecture are seen; the cottage style, with neat verandas, is one much adopted for private dwellings, and has a neatness of external appearance, with which the interior usually corresponds. Many have neat gardens attached to them, in which, during the summer season, the blooming rose, as well as the pink, the stock, and other European flowers, impart a beauty, and remind one of home; or, in lieu of these gay vegetable productions, the industrious housekeeper has caused the plot of ground to be planted with peas, beans, cabbages, and other culinary vegetables. The tree cabbage, common on the European continent, but rarely seen in England, I observed introduced in the gardens; it thrives well in the colony. * * *

"The best view of the town, shipping, and adjacent country is that seen from the 'rocks,' and the prospect afforded from this elevated situation is very fine. Shops of all kinds are rapidly multiplying; and lately there have been extensive emigrations of artizans of all descriptions from every part of the united kingdom; butchers, bakers, pastrycooks, provision merchants, shoemakers, apothecaries, fancy-bread bakers, booksellers, &c. &c. are numerous, and have neat, and some even elegant shops; the press sends forth their cards and circulars, and large posting bills, printed in a neat and even superior manner, equal to any similar production in our country towns in England."

Of the state of the convict population, Mr. Bennett observes,—

"The opinion which appears generally to prevail, that prisoners of the crown are placed in the colony in a better situation than free men, there is too much reason for regarding as correct. They are well fed and clothed, take good care to be never overworked, and have an hospital, with the best attendance, when sick. An assigned servant or convict may be correctly defined as an individual who is well fed and clothed —insolent and indolent—and takes care that the little work he has to perform is badly done. When sick, which often proceeds from lying idle too long in the sun, he walks to the hospital; and, from the exertion, together with the thoughts of 'bleeding, blistering, and physic,' he soon recovers, and returns to his master, to again undergo the fatigue of doing little or nothing. One of these characters applied for his ticket of leave, but soon returned, wishing again to be employed by his former master, if only for his food; at the same time observing, that he was better off before, in bondage, than he was now, partially free—so his fellow servants persuaded him to send the ticket back, and say, '*it was all a mistake.*'

"The following anecdote may serve to illustrate the *misery* an iron gang occasions to spirit drinkers. A convict was once weighed by his comrades, and the weight at that time marked with chalk upon the barn door. A short time after this took place, he was sentenced for an offence to an iron gang for six weeks. After the term of his punishment had expired, and he returned to his master, he was observed to be in a stouter and more robust condition than before; his comrades again weighed him, to see what he had gained in flesh, if not in any moral benefit, by his punishment; when it was ascertained he had gained twenty pounds. * * *

"The London pickpockets are considered to make the best shepherds in the colony, as it suits their naturally idle habits; the industrious labourer cannot endure the very wearisome and lazy employment of looking after sheep; the petty larcener soon gets attached to his woolly charges, and the sheep, no doubt, by a natural instinct, to him; and thus the animals are tended with some degree of care; but the regular workman, detesting the occupation, (unless incapacitated from a more active employment, by age or accident,) seldom takes any interest in the valuable property entrusted to his care; the former are, therefore, to be preferred. The shepherds, when tending their flocks in the pasturage wile away their leisure time by manufacturing coarse but durable straw hats."

From the 'Wanderings' we shall collect together some scattered paragraphs relating to the native population.

"During a visit to the Murrumbidgee and Tumat countries, as well as other parts of the colony, I availed myself of every opportunity to procure information regarding acts of infanticide, as existing among the aborigines of this country. I succeeded in ascertaining that infants were frequently destroyed: sometimes the reason assigned was some personal defect in the infant, (whence we may attribute the fact of a deformed person being seldom seen among native tribes,) or the mother not wishing to have the trouble of carrying it about; the female children were more frequently destroyed than the males. I heard of a weak and sickly child having been destroyed, and even eaten: the reason given by the unnatural parents was, that they were very hungry, and the child no use and much trouble; one redeeming quality, however, was, that they displayed a sense of shame when acknowledging the fact, and gave the reason for which they had committed so barbarous an act. It is seldom they will confess having destroyed their offspring: one, however, who had a child by an European, acknowledged it readily; and the reason given for the commission was its being *like a warragul, or native dog.* This was because the infant, like its papa, had a 'carroty poll,' and thus resembled, in colour, the hair of the native dog, which is certainly not so handsome as the dark black locks of the aboriginal tribes.

"Although addicted to infanticide, they display, in other instances, an extraordinary degree of affection for their dead offspring, evidenced by an act that almost exceeds credibility, had it not so often been witnessed among the tribes in the interior of the colony. I allude to the fact of deceased children, from the earliest age to even six or seven years, being placed in a bag, made of kangaroo skin, and slung upon the back of the mother, who, besides this additional burden, carries her usual *netbul*, or *culy*, for provisions, &c. They carry them thus for ten or twelve months, sleeping upon the mass of mortal remains, which serves them for a pillow, apparently unmindful of the horrid fœtor which emanates from such a putrifying substance. Habit must reconcile them to it, for a woman carrying such a burthen, may be 'nosed' at a long distance before seen; and a stranger, unacquainted with this native custom, will see a woman with a large pack upon her back, from which such an odour proceeds, as to make him doubt from what it can be produced. When the body becomes dry, or only the bones left, the remains are burnt, buried, or placed into a hollow trunk or limb of a tree: in the latter instance covering the opening carefully with stones, &c. All the information that could be procured from them respecting this disgusting custom, was, 'that they were afraid, if they buried them, the *Buckee*, or devil-devil would take them away. * * *

"Their habitations are merely sheets of bark, stripped from the trees in the vicinity, and supported by props, the sheet of bark being placed to windward, and shifted as might be required, the fire for cooking purposes, &c., being made in front. The aborigines are very expert in stripping large and perfect sheets of bark from the trees, and as this material is used by the colonists for the covering of huts and other purposes, the natives are often employed by them to procure it. The bark of two species of the *Eucalyptus* called 'stringy bark' and 'box-tree' by the colonists, (more particularly the former,) is preferred, as from them it is more readily stripped in pieces of the large size usually required. If the aborigines wanted to pass a river, I observed them strip off sheets of bark with great expedition, upon which they crossed, paddling themselves with a piece of wood, sometimes placing piles of mud at each end of the rude *bark* to prevent the ingress of the water, if there was anything in it they wished to keep dry: having all the services they require out of the rudely constructed vessels, they desert and leave them either to be carried down the stream or rot on the banks, being aware that another canoe of the same rude construction is always ready when it may be required. * * *

"The natives are as dirty in general habits as in cookery, and this *unclean* race were often

seen as 'chimney ornaments' in the settlers' habitations, placing themselves on each side of the fire-place, or almost in the hearth, to get warm, looking like a huge piece of charred wood, and forming objects neither useful nor ornamental; they have a great antipathy to any thing like labour, (I do not mean to disparage the race by this observation, for all uncultivated tribes are similar in this respect,) and the only way to get rid of them whenever they became troublesome, was to set them to work."

The following is the curious description of a clergyman by one of the natives:

"He, white feller, belonging to Sundy, get up top o' waddy, pile long corrobera all about debbil debbil, and wear shirt over trowsel."

Whether this was intended for wit, it may be difficult to determine; but we think that our inquisitive naturalist could hardly mistake what follows:—

"The aborigines were now collecting about the farms, in expectation of a feast at the ensuing Christmas festival. I went up to one who was busily engaged in making an opossum-skin cloak: he sewed the skins together with the fibres of the bark of the 'Stringy Bark' tree for thread, by first perforating holes in it with a sharp piece of bone, and then passing the thread through the holes as he proceeded. I asked him some questions, and then gave him a piece of tobacco, he asked for two piece tobacco, because '*I merry busy, and you ask me much*,' said blackee."

We shall now give an extract or two from the 'Journal of a Naturalist.'

"It was related to me, that formerly such multitudes of parrots would beset a field of grain, as to oblige a settler to employ a number of men expressly to drive them away! and even then it was done with difficulty. This is now rare: which circumstance is not attributed to any depopulation of the 'Polly' tribe, but from cultivation having become more extended; the parrot population being now divided in flocks about the different fields, when formerly they made their formidable attacks upon one or two only, and then in such numbers, that, left undisturbed for only a few hours, it would suffice to destroy the hopes of the settler, at all events for that season. It was computed that thirty or forty thousand of these birds were about the field at one time; and, from what I saw, I do not consider the numbers were exaggerated."

The Bugong mountains, of which a view is given, is so called, it appears, from the multitude of small moths, called Bugong by the aborigines, which congregate about the masses of granite on this range of hills. These insects are sought after by the natives, as a delicious food.

"It appears that the insects are only found in such multitudes on these insulated and peculiar masses of granite; for about the other solitary granite rocks, so profusely scattered over the range, I did not observe a single moth, or even the remains of one. Why they should be confined only to these particular places, or for what purpose they thus collect together, is not a less curious than interesting subject of inquiry. Whether it be for the purpose of emigrating, or any other cause, our present knowledge cannot satisfactorily answer. * * *

"The Bugong moths collect on the surfaces and also in the crevices of the masses of granite in incredible quantities: to procure them with greater facility, the natives make smothered fires underneath those rocks about which they are collected, and suffocate them with smoke, at the same time sweeping them off frequently in bushels-full at a time. After they have collected a large quantity, they proceed to prepare them, which is done in the following manner.

"A circular space is cleared upon the ground, of a size proportioned to the number of insects to be prepared; on it a fire is lighted and kept burning until the ground is considered to be sufficiently heated, when, the fire being removed and the ashes cleared away, the moths are placed upon the heated ground, and stirred about until the down and wings are removed from them; they are then placed on pieces of bark, and *winnowed* to separate the dust and wings mixed with the bodies: they are then eaten, or placed into a wooden vessel called a 'Walbun, or Culibun,' and pounded by a piece of wood into masses or cakes resembling lumps of fat, and may be compared in colour and consistence to dough made from smutty wheat mixed with fat. The bodies of the moths are large, and filled with a yellowish oil, resembling in taste a sweet nut. These masses (with which the 'Netbuls' or 'Talabats' of the native tribes are loaded, during the season of feasting upon the 'Bugong.') will not keep above a week, and seldom even for that time; but by smoking they are able to preserve them for a much longer period. The first time this diet is used by the native tribes, violent vomiting and other debilitating effects are produced; but after a few days they become accustomed to its use, and then thrive and fatten exceedingly upon it.

"These insects are held in such estimation among the aborigines, that they assemble from all parts of the country to collect them from these mountains. It is not only the native blacks that resort to the 'Bugong,' but crows also congregate for the same purpose. The blacks (that is, the crows and aborigines) do not agree about their respective shares, so the stronger decides the point; for when the crows (called 'Arabul' by the natives) enter the hollows of the rocks to feed upon the insects, the natives stand at the entrance, and kill them as they fly out, and afford them an excellent meal, being fat from feeding upon the rich Bugong. So eager are these feathered blacks or Arabuls after this food, that they attack it even when it is preparing by the natives; but as the aborigines never consider any increase of food a misfortune, they lie in wait for the Arabuls, with waddies or clubs, kill them in great numbers, and use them as food.

"The Arabul is, I believe, not distinct from the common crow found on the low lands, and which is called 'Gundagiar' or 'Worgan,' by the natives: the distinction, according to native report, is, that the 'fat fellers,' or those fed on the Bugong, are called Arabul, and the 'poor fellers,' or those who pick up what they can get on low lands, are designated by the latter names. About February and March the former visit the lowlands, having become in fine plump condition from their luxurious feeding. The assemblage of so many different tribes of natives at this season about the same range, and for similar objects, causes frequent skirmishes to take place between them; and oftentimes this particular place and season is appointed to decide animosities by actual battles, and the conquered party lose their supply of Bugong for the season.

"The height of the Bugong mountain may be two thousand feet from its base, and upwards of three thousand feet above the level of the sea. The quantity of moths which may be collected from one of the granite groups, it is calculated would amount to at least five or six bushels. The largest specimen I obtained measured seven-eighths of an inch with the wings closed, the length of the oily body being five-eighths of an inch, and of proportionate circumference; the expanded wings measured one inch and three quarters across; the colour of the wings dark brown, with two black ocellated spots upon the upper ones; the body filled with yellow oil, and covered with down."

Here we conclude for the present.

Catterick Church, in the County of York: A correct Copy of the Contract for its Building, dated in 1412, *&c.* By the Rev. James Raine. With Views, Elevations, &c., by Anthony Salvin, Architect. London: Weale.

The History and Antiquities of the Fortifications to the City of York. By Henry F. Lockwood and Adolphus H. Cates, Architects. London: Weale.

Clarke's Easterbury Illustrated. London: Weale.

Here are three handsome volumes, respectively devoted to the illustration of our ecclesiastical, our military, and our domestic architecture.

In the first, the contract for building Catterick Church, now for the first time *accurately* printed, is a curious specimen of English as it was spoken at the commencement of the fifteenth century, in a remote district in Yorkshire. The reader, however, who should take it as a specimen of the English generally of the period, would be greatly deceived, since that spoken in London and in the southern counties, would be found much more closely to resemble the English of the present day. The simplicity of the terms of the contract will make many an architect smile, as well as the "rewarde" which Richard of Cracall was to receive if he completed his contract within the time specified. This was ten marks in money, and a gown "of William's wearing," a cast-off upper dress of William of Burgh, one of the contractors. But however the architect in the present day may be disposed to smile at a gift of cast clothes, we can easily imagine the pride with which Richard of Cracall put on the ample gown which had been worn by a great landed proprietor, and which had been expressly given as a token of approbation of the finished work. Indeed Mr. Raine observes, that "a robe or garment was a very general consideration in times of old, in addition to a money payment." Remarking upon the absence of any reference to a plan, he proceeds:

"No reference is made in the contract to any thing resembling the *working drawing* of modern times; nor has the greatest pains taken for this purpose been able to discover any such record relative to any other early fabric. The archives of Durham Cathedral have been carefully searched for architectural plans, but without success. A manuscript Commentary upon the Prophet Ezekiel, belonging to the Dean and Chapter of Durham, written apparently in the eleventh century, contains some curious pen-and-ink delineations, in the Norman style, of Ezekiel's temple, such as ground plans, elevations, &c., which prove the architectural skill of the commentator, and the fact, that it was no unusual thing to commit to parchment illustrations of this nature. "Patterns in paper," "portraictures," "patterns in timber," are referred to in the contract for the Beauchamp Chapel at Warwick, in 1439; but during the earlier centuries of our national architecture, we suspect that models in wood, or drawings upon wooden tablets, were in general adopted as specifications by the contracting parties, and referred to during the progress of the work. Admitting this to have been the case, length of time, and the nature of the material, may account for the present non-existence of records which would have been so interesting. A mutilated figure in stone, some years ago removed from a niche or housing on the tower of Dur-

ham Cathedral, holds in its hands a church carved in the same material, upon a small scale, and of the Norman period. This figure may either represent the bishop who planned the work, or the mason who carried it into execution. We suspect the latter; but in either case we have here a proof that our ancestors practised the art of modelling upon a small scale, the point for which we are contending. Again, what is still more important to our object, there is in Worcester Cathedral, according to Mr. Carter (Ancient Architecture, i. p. 54), in the spandril of an arch, a representation, in stone, of an architect presenting the design of a building to a superior personage, who is examining it with attention. We fully agree with Mr. Carter as to the general purport of this valuable memorial, but we differ from him in his explanation; and we believe it, besides, to contain an important fact, which he has entirely overlooked. The drawing, on tablets, is in the hands of an ecclesiastic, but instead of having just received it for his approbation from the builder who is sitting near him, we believe him, *after having designed it himself*—for we could easily prove that our early architects were, in general, ecclesiastics—*to be in the act of proposing it to the builder*, as the pattern to be imitated in the contemplated work. At all events, the drawing is on tablets—another proof of our general theory, that wood, or some such material, was preferred to parchment."

Now, whatever may have been the method pursued in regard to mere parish churches, we can scarcely believe that parchment working drawings were never used during the construction of our cathedrals, especially when we consider their greater portability than models, and their being so much less liable to injury. The working drawings of many of the continental cathedrals are yet in existence, and are said to be so minute and precise, that an architect might easily rebuild the church from them. The *Quarterly Review*, some years since, remarking on this subject, says, that most of the drawings of Cologne, of Ulm, and of Strasburgh, still remain, and that there is also an engraving of the intended spire of Malines, which Sandrart gave from a similar source.

The next work on our table has a peculiar claim to the attention both of the architect and the antiquary, inasmuch as it forms the first part of a series intended to illustrate a branch of architectural antiquity which has hitherto fallen into very inefficient hands—the military architecture of the middle ages. It is a full description, illustrated by drawings from actual admeasurement, of the towers and walls of the venerable city of York, together with a history of them from the earliest times to the present year. We have been much gratified in looking over the plates: each plate seems to possess a distinctive character, and places that most curious remain the multangular tower, to which we are inclined to assign a Roman origin, at the one end of the list, and the comparatively modern Fishergate at the other. York seems to possess a series of specimens of middle-age military architecture which no other British city can boast. The history is well drawn up, and the writers have spared no pains in consulting authorities. We would, however, warn them in their subsequent works to be very wary of statements found in the English chroniclers—Hall, Grafton, or Hollingshed, especially if relating to the early periods of our history. There is scarcely an historical blunder in the popular histories of England which may not be traced to the misapprehensions or careless translations of these very chroniclers. We speak decidedly on this subject, for we speak advisedly, having frequently compared passages said by them to have been transcribed from William of Malmsbury, Matthew Paris, and others, and found them replete with mistakes. For the older chroniclers we have much more leniency, for we have frequently found their statements supported by contemporary documents; nay, we have sometimes thought that even Jeffry of Monmouth, he whose very name as an historian has been placed in the same category as that of Sir Johan Maundeville as a traveller, has scarcely received the attention he really merits. We do not refer to that portion of his history which tells of Brute, and Locrine, and the giant Gogmagog, but to that part which extends from about the third century to the exile of Cadwallader to Bretagne. That this writer certainly availed himself of an immense mass of traditions still floating among the Britons, we have the testimony of the late Mr. Ellis, Sharon Turner, and Mr. Price; and, of that mass of tradition, what was more likely to be handed down correctly, because most vividly impressed on the minds of the homesick exiles, than those circumstances which led to their abandonment of their father land? To return from this digression, we cordially recommend Messrs. Lockwood and Cates's work to our readers, and wish them success in their future labours.

The third work before us presents a series of plans, illustrative of an old mansion, in the parish of Barking, termed Easterbury, which name the writer who has furnished Mr. Clarke with the two sheets of letter-press quaintly saith, "belongs not unto any village or hamlet, (which there is not,) but unto this mansion alone, as if called East building, to distinguish it from Westbury, a smaller mansion, with manorial territory and privileges, which lies westward, very nigh to the town of Barking." What families originally occupied the spot, and whether Eastbury, like its neighbour Westbury, was a fief of the abbey of Barking, whose lady abbess held baronial rule over a large extent of territory, as the writer says, "there is none evidence," nor, what is of more importance, can the date of the building be ascertained with any degree of certainty. 1572 has been the date assigned when the estate was in the possession of Clement Lisley, and it is probably correct. The mansion, wholly built of large red bricks, presents in its general features the domestic style of the Elizabethan era, a period at which we cannot but consider the Tudor architecture greatly on the decline. The work of Mr. Clarke will, however, we doubt not, prove very acceptable to his brother architects, as affording full and minute details of a building which seems to have undergone scarcely any alterations since its first erection, and which will, within a few years, most probably be levelled with the ground.

In conclusion, we must express our gratification, that so many works like these owe their origin, in the present day, to the exertions of architects; not merely because it affords a pledge of that perfect *accuracy*, which, important in every branch of antiquarian research, is most important of all in this; but even more for the pledge it affords, that the hand which has so carefully copied, and so minutely delineated, every peculiarity of the venerable ruin, will never be wantonly raised for its overthrow.

Jacob Faithful. By the Author of 'Peter Simple,' 'The King's Own,' &c. 3 vols. London: Saunders & Otley.

It is not kind to an author to unravel the plot of his forthcoming novel, to lay bare the heart of his mystery in a prefatory review; nor, in truth, is it a very easy matter to do so skilfully. But when the author himself prefixes to each volume a table of contents, it must be evident that he does not rest his hopes of success on any mystery, or intricacy, or involvements, and disentanglings; and the critic who shall present such table of contents to his readers must, at least in the author's opinion, do him full justice. This we have resolved upon in the present instance; and we are of opinion, that reader and author will be equally satisfied.

Contents to the 1st Volume.

Chap. 1.—My birth, parentage, and family pretensions—Unfortunately I prove to be a detrimental or younger son, which is remedied by a trifling accident—I hardly receive the first elements of science from my father, when the elements conspire against me, and I am left an orphan.

C. 2.—I fulfil the last injunctions of my father, and I am embarked upon a new element—First bargain in my life very profitable, first parting with old friends very painful—First introduction into civilized life very unsatisfactory to all parties.

C. 3.—I am sent to a charity school, where the boys do not consider charity as a part of *their* education—The peculiarities of the master, and the magical effects of a blow, of the nose—A disquisition upon the letter A, from which I find all my previous learning thrown away.

C. 4.—Sleight of hand at the expense of my feet—Filling a man's pockets as great an offence as picking them, and punished accordingly—A turn out, a turn up, and a turn in—Early impressions removed, and redundancy of feeling corrected by a spell of the rattan.

C. 5.—Mr. Knapps thinks to catch me napping, but the plot is discovered, and Barnaby Bracegirdle is obliged to loosen his braces for the second time on my account—Drawing caricatures ends in drawing blows—The usher is ushered out of the school, and I am very nearly ushered into the next world, but instead of being bound on so long a journey, I am bound 'prentice to a waterman.'

C. 6.—I am recommended to learn to swim, and I take the friendly advice—Heavy suspicion on board of the lighter, and a mystery, out of which Mrs. Radcliffe would have made a romance.

C. 7.—The mystery becomes more and more interesting, and I determine to find it out—Prying after things locked up, I am locked up myself—Fleming proves to me that his advice was good when he recommended me to learn to swim.

C. 8.—More of the ups and downs of life—Up before the magistrates, then down the river again in the lighter—The Toms—A light heart upon two sticks—Receive my first lesson in singing—Our lighter well manned with two boys and a fraction.

C. 9.—The two Toms take to protocolling—Treaty of peace ratified between the belligerent

parties—Lots of songs and supper—The largest mess of roast meat upon record.

C. 10.—Help to hang my late bargemate for his attempt to drown me—One good turn deserves another—The subject suddenly dropped, at Newgate—A yarn in the law line—With due precautions and preparation, the Domine makes his first voyage—to Greenwich.

C. 11.—Much learning afloat—Young Tom is very lively upon the dead languages—The Domine, after experiencing the wonders of the mighty deep, prepares to revel upon lobscouse—Though the man of learning gets many songs and some yarns from old Tom, he loses the best part of a tale, without knowing it.

C. 12.—Is a chapter of tales in a double sense—The Domine, from the natural effects of his single-heartedness, begins to see double—A new definition of philosophy, with an episode on jealousy.

C. 13.—The 'fun grows fast and furious'—The pedagogue does not scan correctly, and his feet become very unequal—An allegorical compliment almost worked up into a literal quarrel—At length, the mighty are laid low, and the Domine hurts his nose.

C. 14.—Cold water and repentance—The two Toms almost moral, and myself full of wise reflections—The chapter, being full of grave saws, is luckily very short; and though a very *sensible* one, I would not advise it to be skipped.

C. 15.—I am unshipped for a short time, in order to record shipments and engross invoices—Form a new acquaintance, what is called in the world 'a warm man,' though he passed the best part of his life among icebergs, and one whole night within the ribs of death—His wife works hard at gentility.

C. 16.—High life *above* stairs, a little below the mark—Fashion, French, virtù, and all that.

C. 17.—The Tomkinses' fête champêtre and fête dansante—Lights among the gooseberry-bushes—All went off well, excepting the lights, they went out—A winding up that had nearly proved a catastrophe—Old Tom proves that danger makes friends, by a yarn, young Tom, by a fact.

Contents to the 2nd Volume.

CHAP. 1.—The art of hard lying made easy, though I am made very uneasy by hard lying—I send my ruler as a missive, to let the parties concerned know, that I'm a rebel to tyrannical rule—I am arraigned, tried, and condemned without a hearing—What I lose in speech is made up in feeling, the whole wound up with magnanimous resolves and a little sobbing.

C. 2.—The breach widened—I turn sportsman, poacher, and desperado—Some excellent notions propounded of common law upon common rights—The common keeper uncommonly savage—I warn him off—He prophesies that we shall both come to the gallows—Some men *are* prophets in their own country—The man right after all.

C. 3.—Our last adventure not fatal—Take to my grog kindly—Grog makes me a very unkind return—Old Tom at his yarns again—How to put your foot in a mischief, without having a hand in it—Candidates for the cat-o'-nine-tails.

C. 4.—On a sick bed—Fever, firmness, and folly—'Bound 'prentice to a waterman'—I take my first lesson in love, and give my first lesson in Latin—The love lesson makes an impression on my auricular organ—Verily, none are so deaf as those who won't hear.

C. 5.—Is very didactic, and treats learnedly of the various senses, and 'human nature;' is also diffuse on the best training to produce a moral philosopher—Indeed, it contains materials with which to build up one system, and half a dozen theories, as these things are now made.

C. 6.—A very sensible chapter, having reference to the senses—Stapleton, by keeping his under controul, keeps his head above water in his wherry—Forced to fight for his wife, and when he had won her, to fight on to keep her—No great prize, yet it made him a prize-fighter.

C. 7.—The warmth of my gratitude proved by a very cold test—The road to fortune may sometimes lead over a bridge of ice—Mine lay under it—*Amor vincit* everything but my obstinacy, which young Tom and the old Domine in the sequel will prove to their cost.

C. 8.—'The feast of reason and the flow of soul'—Stapleton, on human nature, proves the former; the Domine, in his melting mood, the latter—Sall's shoe particularly *noted*, and the true 'reading made easy' of a mind at ease, by old Tom.

C. 9.—The Domine's bosom grows too warm; so the party and the frost break up—I go with the stream and against it; make money both ways—Coolness between Mary and me—No chance of a Thames' edition of Abelard and Eloise—Love, learning, and Latin, all lost in a fit of the sulks.

C. 10.—A good *fare*—Eat your pudding and hold your tongue—The Domine crossed in love; the crosser also crossed—I find 'that all the world's a stage,' not excepting the stern sheets of my wherry—Cleopatra's barge apostrophized on the river Thames.

C. 11.—The pic-nic party—Sufferings by oil, ice, fire, and water—Upon the whole, the 'divarting vagabonds,' as the Thespian heroes and heroines are classically termed, are very happy, excepting Mr. Winterbottom, whose feelings are, by sitting down, down to zero.

C. 12.—Mr. Turnbull 'sets his house in order'—Mrs. T. thinks such conduct very disorderly—The captain at his old tricks with his harpoon; he pays his lady's debts of honour, and gives the applicant a quittance under his own foot—Monsieur and Madame Tagliabue withdrawn from the society of *ces barbares les Anglais*.

Contents of the 3rd Volume.

CHAP. 1.—Mr. Turnbull finds out that money, although a necessary evil, is not a source of happiness; the Domine finds out that a little calumny is more effectual than Ovid's Remedy for Love; and I find out that walking gives one a good appetite for fillet of veal and bacon—I set an example to the clergy in refusing to take money for a seat in church.

C. 2.—Mr. Turnbull and I go on a party of pleasure—It turns out to be an adventure, and winds up with a blunderbuss, a tin box, and a lady's cloak.

C. 3.—The waterman turns water knight—I become chivalrous, see a beautiful face, and go with the stream—The adventure seems to promise more law than love, there being papers in the case, that is, in a tin box.

C. 4.—A ten-pound householder occupied with affairs of state—The advantage of the word "implication"—An unexpected meeting and a reconciliation—Resolution *versus* bright black eyes—Verdict for the defendant, with heavy damages.

C. 5.—How I was revenged upon my enemies—We try the bars of music, but find that we are barred out—Being *no go*, we *go* back.

C. 6.—The Domine reads me a sermon out of the largest book I ever fell in with, covering nearly two acres of ground—The pages not very easy to turn over, but the type very convenient to read without spectacles—He leaves off without shutting his book, as parsons usually do at the end of their sermons.

C. 7.—A long story, which ends in the opening of the tin box, which proves to contain *deeds* much more satisfactory to Mr. Wharncliffe than *the deeds* of his uncle—I begin to feel the blessings of independence, and suspect that I have acted like a fool—After two years' consideration I become quite sure of it, and, as Tom says, 'No mistake.'

C. 8.—A chapter of losses to all but the reader, though at first Tom works with his wit, and receives the full value of his exertions—We make the very worst bargain we ever made in our lives—We *lose* our fare, we *lose* our boat, and we *lose* our liberty—All loss and no profit—Fare very unfair—Two guineas worth of argument, not worth two-pence, except on the quarter-deck of a man-of-war.

C. 9.—There are many ups and downs in this world—We find ourselves in the Downs—Our Captain comes on board, and gives us a short sermon upon antipathies, which most of us never heard the like of—He sets us all upon the *go*, with his *stop* watch, and never calls the *watch* until the *watch* is satisfied with *all hands*.

C. 10.—"To be, or not to be," that is the question—*Splinter*, on board of a man-of-war, very different from *splinters* in the finger on shore—Tom prevents this narrative from being wound up by my going down—I receive a lawyer's letter, and instead of being annoyed, am delighted with it.

C. 11.—I interrupt a matrimonial duet and capsize the boat—Being on dry land, no one is drowned—Tom leaves a man of war because he don't *like* it—I find the profession of a gentleman preferable to that of a waterman.

C. 12.—All the little boys are let loose, and the Domine is caught—Anxious to supply my teeth, he falls in with other teeth, and Mrs. Bately also shows her teeth—Gin outside, gin in, and gin out again, and old woman out also—Domine in for it again—More like a Whig ministry than a novel.

C. 13.—In which I take possession of my own house, and think that it looks very ill furnished without a wife—Tom's discharge is sent out, but by accident it never reaches him—I take my new station in society.

C. 14.—The Domine proves Stapleton's "human natur" to be correct—The red-coat proves too much of a match for the blue—Mary sells Tom, and Tom sells what is left of him, for a shilling—We never know the value of anything till we have lost it.

C. 15.—I am made very happy—In other respects a very melancholy chapter, which, we are sorry to inform the reader, will be followed up by one still more so.

C. 16.—Read it.

C. 17.—In which, as usual in the last chapter of a work, everything is wound up much to the reader's satisfaction, and not a little to the author's, who lays down his pen, exclaiming, Thank God!

Next week, perhaps, we shall offer an opinion of our own on this novel, and illustrate some of these illustrative introductions now given.

European Belles Lettres of the Latest Times, &c.—[Die Schöne Litteratur Europa's in der Neuesten Zeit, &c.] By Dr. O. L. B. Wolff, Professor at the University of Jena. Leipzig. London: Richter & Co.

THIS volume affords a striking and happy illustration of German industry and literary enthusiasm. Dr. Wolff is a distinguished Professor, engaged in the laborious occupation of imparting instruction to the turbulent youth (*Burschenschaft*) of a German university. But, as though this were the slightest and easiest of tasks, finding a considerable number of grown ladies and gentlemen, desirous of acquiring such a knowledge of the living literature of Christian Europe as might satisfy the merely curious, and serve to guide the choice and the studies of such as wished to make themselves thoroughly ac-

quainted with the language and literature of any one foreign nation, he composed for, and delivered to, them a course of lectures on the poets and poetry (Germans include prose fiction in poetry) of the nineteenth century in England, France, Italy, Spain, Portugal, Germany, Denmark, Sweden, Russia, Poland, and Hungary. These lectures constitute the goodly octavo now before us; and, to readers of German, who may share in any of the views of Dr. Wolff's audience, we strongly recommend its perusal. For ourselves, within our narrow limits, we can do no more towards imparting its stores of knowledge, than offer two or three specimens of the subjects treated, and of the lecturer's manner of treating them; and, as this last should logically and *æsthetically*† come first, to show the character of the judgments pronounced, we will begin with the review of English poetry and poets, taking from amongst the number, Lord Byron, chiefly because he is the one best appreciated by all Germans, especially those, like our Professor, of the liberal school. Of him Dr. Wolff says—

Byron was the martyr of genius. His character is his poetry, his poetry his character. * * Whatever can be required of a poet he possessed; the most glowing imagination, fulness of thought, deep sensibility, and a power of eloquence that, without any previous adjuration, poured immediately out from the soul a roaring mountain torrent, never exhausted, ever flowing when his heart was touched—a power such as is rarely bestowed. I might say he was the most highly-developed human being that ever existed, since in him all the virtues and all the faults of human nature were united; hatred and love, zeal for liberty and a domineering temper, goodness and harshness—in short, everything except vulgarity, for, over the whole, his innate nobleness of nature hovered triumphant. * * * Even because in all points he so completely gave himself as he was, he must awaken some kindred tone in every breast; for, whatever touches the individual, that he has experienced—and doubly—as well in his actual as in his poetical existence. * * * Therefore, if we cannot altogether love him—if we must occasionally feel wroth with him, because he often wounds and pains us, yet must we ever admire and revere in him the nobility of human nature, as it reveals itself in its richest strength—in the creative activity of genius. * * *

It is in his smaller lyrical pieces that the poet appears most amiable. * * * A dark melancholy spreads her veil over most of these, but the internal truth of feeling breaks, nevertheless, victoriously through. They touch upon every momentous point of his external and internal life, and bear within them a strange species of magic, that acts upon the soul of the reader, who long continues to see every object in the light in which they have presented it. * * *

Childe Harold's Pilgrimage paints the inmost feelings of the poet, as they arose in the course of his travels, and of his life, under the borrowed personality of a wild young profligate, an exaggerated likeness of the poet, who has drawn his own portrait from a concave mirror. This most idiosyncratic poem, which can hardly be classed under any of the recognized divisions, is, in fact, a sort of poetic diary, and, considered under this aspect, is wholly free from the faults usually laid to its charge, since of such a piece the *subjectivity*‡ of its author is an essential quality. * * * The last two cantos are superior to the first two, in proportion as the poet's soul had more richly developed itself, and, like fine steel, acquired temper in the fire of passion and of fate.

Concerning Don Juan, our author quotes from the works of the deceased Wilhelm Müller a long and clever passage, comparing this poem with Childe Harold, as fully expressing his own sentiments. We extract the beginning and the end.

Childe Harold and Don Juan, the most individual and comprehensive works of our poet, are two antipodes, having, however, like the inhabitants of the light and dark sides of the world, a common centre, round which they revolve, upon which they are supported. This centre is the spiritual personality of their author, which manifests itself in opposite directions, through the medium, here of a misanthropic pilgrim, there of a life-enjoying worldling. * * * In the execution both poems appear to us equally successful, each according to its own character. Here, inward energy of mind, and a boldly-soaring imagination, speak in language which struggles through its antiquated form; there, a social chit-chat, a poesy in the very lightest undress, that seems to render only a sportive homage to form, and whose motto is, "What pleases is lawful." Why the morality of Don Juan has been run down as so much more dangerous than that of Childe Harold, we do not conceive. Don Juan is not a book adapted to influence the age most open to seduction, youth; and he who is able to comprehend its spirit, will likewise be able to resist it, if a dangerous attack from this quarter must still be matter of apprehension. The fancy and the feelings are more easily seduced than the understanding; and, therefore, is the witty immorality of Don Juan a much less dangerous viand for literary taste than the sentimental misanthropy of the romantic pilgrim.

Our next specimen shall be from the review of Italian literature, and this chiefly because we there find an extract from the tragedian Nicolini, so superior to anything we ever before saw of his, that we confess we were a little astonished to discover what this tame poet can do, when inspired by his subject. Our Professor tells us—

Nicolini's last work, the tragedy of 'Nabucco,' which clothes recent events in a garb of fiction, appears to have made but little way in his own country; and, whether upon good or bad grounds, we will not inquire, to have been, in some sort, suppressed.

Nabucco, it seems, means Napoleon, which may sufficiently explain this suppression, or, if it do not, the scene which Wolff extracts amply supplies any deficiency. We will translate the beginning, after a word of introduction. Nabucco has been defeated in battle, and is brought upon the stage by warriors, whose arms differ from his, and whose leader keeps his visor closed. Nabucco says—

Whither, thou unknown champion, dost thou lead?
With what illusive hope wouldst thou deceive me?
Or to which hostile monarch's rage or pity,
Traitor, preserv'st thou me, to be by him
Slain or degraded? Vainly dost thou hope it,
Assyrian! An unfailing friend, my sword,
Is left me.
Arsaces (unclosing his visor). Lo! my countenance
I reveal;
Proceed.
Nab. Arsaces! Thou against me wagest
Magnanimous hostility; Nabucco
This day by thee is overcome. But why
Wouldst thou I should outlive my fortune? Where,
Save on the battle field, can I such death
Hope, as beseems a king? With my slain friend
I well had fallen! Asfenes! Mine Asfenes!
Ar. Sublime the motive that impels. In thee,
My country and her freedom to defend,
I hope. Vast is the palace, this recess
Unknown. Our swords and skill shall open roads
For flight, and then—
Nab. What say'st? Let Asia rather
Behold me, first by monarchs, now by thee,
Betrayed, submit to fate; let her abhor,
But not contemn Nabucco!
Ar. Fraud has scattered
Thy warriors, not destroyed. Still of thy name
The dread remains. Liberty's sacred standard
Do thou advance, and thousand heroes soon
Will throng upon thy steps. Too great art thou
To be a king. Thy fortune and thine arms,
The frosts of Scythia, and Araxes' floods,
Have baffled; but thy genuine glory then,
When thou didst climb a throne, was forfeited.
Then fell Nabucco, when he made himself
Equal with kings. Mark of thy throne the fruits.
The citizen, because thou art a king,
Abhors thee; whilst, as lowlier born, the king
Hates and disdains thee. Now that fortune frowns,
This calls thee an usurper, that a tyrant.
Th' affection of the one may be regained;
A nation can forgive; no monarch can.
All Asia knows that, to the throne, Arsaces
Bears hate eternal, and fights not for kings.
Yet swear thou truth to liberty, and I
And these brave men are thine! But first, repentant,
Tear thou off, trample on the diadem
That now pollutes thy helmet, and renounce
Kingdom and guilt at once. Then thy right hand
Shall be invincible and sacred.—Give't me!
Lay it upon my bosom;—never thus
Throbbed heart of slave!
Nab. Arsaces, what demand'st thou?
I'll die—deceive I cannot. I was born
To govern, the Assyrian to obey.
The hearts of others (noble error!) thou
By thine own judgest; thou dost feel, not think.
I, who this age and human kind both know
And scorn, know further, that a needful tyrant
I've been, to whom alone, with lesser shame,
The earth might bow. Believe me, liberty
And glory are not for th' ignoble herd.
The hero, not the tyrant, was in me
Abhorred. I erred indeed—'twas when I sought
To aggrandize my slaves. Chains, only chains,
Not trophies! Dear, in tranquil servitude,
The yoke becomes. Mine enemies their crowns
Owe to ancestral guilt, time-consecrated,
Not to ancestral glory. Ancient wrongs
Asia has into rights converted. I,
Truly a king, since equals I have none,
Vainly should I my fifty victories,
And Asia, brimming with my works, invoke
In my defence against these angry slaves,
To ask for succour, could I stoop. The vulgar
(And many are the vulgar) can endure
Of ancient glory, as 't grows dim in kings,
A feeble glimmering. My vivid light
Dazzles their mortal eyes.

This may suffice to show that Nicolini *can* write vigorously—and we turn northward from Italy. It might seem but reasonable to select for extract a German critic's opinion of German literature. But we have reasons of our own for not making this choice. Upon topics so familiar to his auditors, our lecturer gives only general views and *æsthetic* opinions, which, in so short an extract as we have room for, would be scarcely intelligible, and certainly not interesting, to English readers. We shall, therefore, reserve this subject wholly for the more detailed survey with which we hope soon to present our readers in original papers, and conclude our notice of this course of lectures with an extract that may afford sufficient information upon another, little known, and not very fruitful subject, the language and literature of Poland. Dr. Wolff says—

The Polish language is the principal of the five north-western Sclavonian dialects. It has been advantageously modified by foreign, especially Italian influence, and early acquired a characteristic developement, not a little favoured by its flexibility and euphony. This was assisted by the universal practice of sending abroad for education the young nobles, who returned, nevertheless, from foreign lands, glowing with patriotism, and ready to devote the whole love of their hearts to their home. The common people, indeed, retained their rudeness; and the history of the intellectual culture of Poland is distinguished by one remarkable circumstance, that here the advancement of literature, as of the arts and sciences, has proceeded, not as in

† A German word, coined some years since, and now the rage, to express the philosophy of the fine arts, including poetry.

‡ A German *æsthetic* term, meaning the colouring of external objects by the peculiar temperament of a writer.

other countries from the middle classes of society, but exclusively from the nobility, and is, therefore, still almost confined to them. * * *

The real history of Polish national literature begins with Sigismund I. The century from this prince's accession to the opening of the Jesuit's College at Cracow (from 1506 to 1622) may justly be considered as its golden age.

During this period flourished, as Wolff tells us, the poets, John, Andreas, and Peter Kochanowsky (two brothers and a nephew), Simon Scymonowicz, and Stanislas Grochowsky, Archbishop of Lemberg, and the historian Stanislas Orzechowsky. No great harvest for a golden age!

The next period, from 1622 to 1760, was one of degradation and lethargy. The language was adulterated with Latin, and little written save dull polemics under John Casimir, and flattery under John Sobiesky: under their successors, nothing.

The third period, from 1760 to the present day, is that of the regeneration of Polish belles lettres. Under Stanislas Augustus the arts and sciences were actively cherished. * * * During the last ten years of the 18th century, and the first thirty of the 19th, Julian Ursin Niemcewicz, and Adam Mikiewicz, take the lead as poets. The first highly distinguished himself as a dramatic and a lyric poet, especially by his historic lays, celebrating the high feats of compatriot heroes, and which, passing from mouth to mouth, have become the common property of the people. Glowing patriotism, originality, happy management of his subject, and sparkling wit, characterize his productions. * * * He took a zealous part in the last war for liberty, and was compelled by its unfortunate issue to leave his country at an advanced age, and seek an asylum in England. * * *

In richness of imagination and creative geniality he is surpassed by Mikiewicz, who is unanimously pronounced the first modern Polish poet. He led the way in breaking the shackles of the French school, which were still anxiously worn in Poland. An army rose up against him, assailing him with all conceivable weapons; it was even asserted, that his proneness to romantic poetry, rather than his freedom of speech, was the cause of his banishment to the Crimea, under Alexander. He subdued his enemies, chiefly by the excellence of his poetic pictures, in which, despite the foreign models and scenes surrounding him, he strove to be perfectly national. He speedily gathered a party, and founded a new school of poetry.

The German versions of some of Mikiewicz's pieces, show that he really possesses much poetic talent; but, as a second-hand translation of poetry could give but little idea of the bard's powers and style, we shall not attempt one, but conclude with a few more names of living, or lately deceased, Polish poets.

Valentine Gurski, happy in odes and idylls; Dyzma Boncza Tomaszewsky, known as an epic and didactic poet, and not unsuccessful in comedy; Alois Felinsky (deceased in 1826), celebrated as a versifier, and not without tragic talent, though in French shackles; Prince Adam Czartoryski (born 1733, died 1823), an original writer of comedy, and otherwise a highly-meritorious cultivator of the national literature; his daughter, a divorced Duchess of Würtemberg, is the writer of a novel, esteemed the best in Polish, 'Malvina.'

Dr. Wolff looks to a future Polish literary harvest, from the soil now so amply manured with blood. *We* suspect that Poland must first cease to be Russian.

A Journey in India, &c. By Victor Jacquemont. 2 vols. 8vo. London: Bull & Churton.

On the first publication of this work, nearly twelve months since, we entered into a general review of it, and gave some copious translations, † but it arrived at an unfortunate moment, just as our own publishing season had begun to put forth its fruits, and we were so cramped for room, that, after all, we did but imperfect justice to a work, every page of which offers subjects of interest. We are well pleased, therefore, to have this forthcoming English edition as an apology for reverting to the subject.

In our former notice, we expressed our regret that the French editor had not introduced the work with some biographical particulars of so amiable a man,—one so devoted to science, and who lost his life in its pursuit. We regret still more, that the English editor has not supplied the deficiency; but the character of the man will become known to the reader of the work, for it is written in legible characters in every page. Jacquemont was one of the most delightful of letter writers: he breathes out his whole heart in his correspondence. A light breaks in upon us at the very opening. It is a passage in a letter written to a friend, who had spent an evening with him, while waiting to embark at Brest:—

"Is it not the same thing, whether a painful object meets our eyes, or an idea of sadness passes over our mind? Imagination and memory form a little magic lantern which makes us melancholy or cheerful, according to the things it calls to our recollection. Without rising from our chair, and without any appreciable change in the external things around us, we are by turns, passively and irresistibly, either serene or madly merry, or taciturn, gloomy, and melancholy. Others, who, with the eyes in their heads, cannot perceive these little internal tempests, see only unevenness of temper in these effects, and unhesitatingly impute it to us as a weakness inherent in our nature. You know too, that M. Fortin, our skilful engineer, makes scales, which, on being changed with the weight of a kilogramme, enclosed in a glass case, and placed in a well-closed room, will fearfully move up and down, if a poor hack but roll along the street. The happy few, my good friend, are machines equally subtle, and still more delicate and impressible. The grocer, who weighs his articles in rude scales, always tending to be in equilibrio, seeing those of Fortin trembling at the passage of a carriage, would not divine the cause of their motion, and like *some others*, would condemn them, as bad and fantastical. Well then! the true reason why, yesterday evening, you found neither me, nor the hot water, to your taste, is, that I at least was, in a very serious mood, and, what is worse, dreadfully *ennuyé*. In such a case, the best thing a man can do, is to go to bed; others gain by it, in not seeing him when disagreeable, and he escapes with, perhaps, dreaming sometimes of annoyances, such as a pair of slippers too short, or any other bedevilment."

Here is his account of life on ship-board, which is, we know by experience, but too true:—

"Life is idle and monotonous. I have lived upon prose since I have been on board: it is the sea system, and I must yield to it. If you imagine that there is any poetry in the life of a sailor, how greatly are you mistaken! Nothing is more like a convent than a ship of war. Every day resembles the one before; each hour brings periodically the same task; there is no care for anything external, and within, a profound reliance on the return of breakfast in the morning, and dinner in the evening. One is sure, when night comes, to find one's bed made, and on awaking in the morning, a change of linen. This uniformity might suit a studious life: but beware of it. The day drags on, and is wasted on words and trifles."

The following appears to us equally just, beautiful, and characteristic:—

"Sometimes, in those rare moments when I am allowed to be alone, fantastic images of happiness and misery rise before me in the dim obscurity of the past, I know not whether I am dreaming or awake: for some moments I remain dazzled, and when I again open my eyes, I perceive that I was only recollecting, while I thought I was dreaming. Yet, my friend, the memory of those piercing impressions which once thrilled my very soul, is becoming gradually effaced. The mind alone possesses memory. It recals exactly the facts of which it has had cognisance,—the ideas which it has conceived. It recals them, even when it has ceased to judge them. The heart has not this faculty: it possesses no memory—it knows only what it actually feels. If it appears to recal past feelings, it is because they are not yet extinguished, and still affect it."

In a former notice, we gave his sketches of society at the Brazils; here is a pretty picturesque description of the harbour of Rio:—

"I unfortunately am acquainted with Naples only by means of pictures and panoramas, and you will most likely not acknowledge me as a judge of its beauty. But the roadstead at Rio appears to me to be still more beautiful. The virgin forest of M. de Clarac is not thick enough; the sky is seen among the trees, and this is incorrect. Enormous parasitical plants, whose scientific names I spare you, but whose foliage resembles the noble leaves of the pine-apple, and their flowers those of the iris, but variegated with a thousand colours, grow on the trees like our misletoe. A thousand different species of creepers climb, and hang in festoons over the flowery masses, and interlace in a hundred different ways. If you wish to pluck one, you would bring down a whole forest. Then, in the environs of Naples, I, as a botanist, can find only sixty species of trees, both great and small, seven or eight at most of which are common. Around Rio I reckon a thousand very common: hence a prodigious variety of foliage, form and colour."

So we, heretofore, gave his account of society at Calcutta; his pleasant sketches of pleasant people, including the Governor General and others. Here is a more general picture:—

"People do not come here to live, and enjoy life; they come—and this is the case in all states of society here—in order to gain something to enjoy life elsewhere. There is no such a thing as a man of leisure at Calcutta. The governor-general has the most to do; next to him the chief justice; and, after these, the advocate-general, and so on. It is almost wholly among this class of men that some are to be found whose taste for study can enable them to steal a few moments of leisure amid the duties of their station. All who are not men of highly gifted intellect, soon lose their energy, and yield to disgraceful indolence. Immediately below the high ranks, you find the most vulgar and common rabble;—yet, for a truly small number of Europeans, there are journals without number, both political and literary; there are learned societies, or societies calling themselves such, of every denomination—craniological, phrenological, horticultural, literary,

† See Numbers 321, 322, 324.

medical, Wernerian, and I know not how many besides—whose members scarcely yield either in science or appetite to similar institutions in the United States."

We must add to this, his account of a dinner at the Government House:—

"The company was assembled in Lady William's drawing-room. I was her *chevalier*, and sat next to her at dinner, that being of course the place of honour. Every thing around was royal and Asiatic: the dinner completely French, and exquisite delicious wines served in moderation, as in France, but by tall servants with long beards, in white gowns with turbans of scarlet and gold. Lord William asked me to take wine, a compliment which I immediately returned, begging the honour of taking wine with my fair neighbour, who was conversing with me on a variety of agreeable topics, and offered to act as my Cicerone. To give our appetites time to revive for the second course, an excellent German orchestra, led by an Italian, performed several of the finest symphonies of Mozart and Rossini, and in a most perfect manner. The distance from which the sound proceeded, the uncertain light flickering between the columns of the neighbouring room, the brilliancy of the lights with which the table was illuminated, the beauty of the fruit which covered it in profusion, and the perfume from the flowers by which its pyramids were decorated, and perhaps also the champagne, made me find the music admirable. I experienced a sort of intoxication, but it was not a stupid intoxication. I chatted with Lady William in French, on art, literature, painting, and music, while I answered, in a regular English speech, the questions put by her husband concerning the internal politics of France."

Of the way in which he passed his time at Calcutta, he thus writes:—

"A *pundit* of Benares came every day, in town, to pass an hour in teaching me Hindoostanee, which, as you know, is nothing but a sort of compromise between the language of the conquerors of India and that of the conquered—a contemptible shapeless medley of Persian and Sanskrit. I regret being obliged to devote so much time to such a study; but what should I do if I were compelled to speak to people only through the medium of an interpreter? So I do not spare myself. * * Then again, the whole vocabulary is entirely new to us, with the exception of some Sanskrit words which we have obtained through the medium of the Latin, the Greek, and the Gothic idiom of the Franks; add to these difficulties, that of hearing nasal sounds which scarcely differ in anything from a balked sneeze, and of forming gutturals taken second-hand from the Arabs, which require throats of rusty iron, parched with thirst, and you will have Hindoostanee. When by hard study you have mastered these difficulties, you have acquired, after all, only a contemptible *patois* without any literature—a language of the court and courtiers, and of the guard-house, as its name imports (*urdu zaban*, the language of camps), which will be neither useful nor agreeable out of the country in which it is spoken.

"The Calcutta botanical garden is an immense and magnificent establishment, in which are cultivated a great number of the vegetables of British India, of some neighbouring territories, and particularly those of the Nepaul, a curious country, whose heights, sending into the gulfs of Bengal and Cambaya the waters which drop from their eternal snows, nourish a vegetation very similar, in some points, to that of the Alps and the Caucasus. A Danish botanist, of mediocre talents, who passes here for the first in the world, is the director of this establishment; he has certainly the best income of any *savant* in existence. * * *

"In this beautiful spot, I gradually accustomed myself to the sun of this country. Undoubtedly it is powerful, and certainly raises unwholesome exhalations from a soil which is nothing but mud imperfectly dried, and filled with the remains of insects and worms without number; but I believe the danger of exposure to it is much exaggerated. Though I flatter myself I have been very prudent, I ought, according to the Indians, to have been dead ere this. * * It is a universal custom to poison one's self with mercury, as Louis XIV., and, of course, his whole court, did with cassia and jalap. I have not had the slightest febrile sensation. I sleep well at night, in weather which others, who ought to be accustomed to it, condemn as immoderately hot; and at daybreak, in the cool and calm morning, I glide to my table and books, or else into the country. I go out long before sunrise, when others are just beginning to fall asleep. This happy state of health is certainly owing to some little good management. My secret is abstemiousness: I recommend it to everybody, and show its success; but they think the remedy worse than the evil, and every one about me goes on taking his three meals, and religiously abstains from all mixture of water with the strongest wines of Spain and Portugal."

In a letter to his brother, he makes mention of the preparations for his journey:—

"In another week, I shall begin this journey of six hundred leagues to the north-west. A bamboo cart, drawn by oxen, will carry my luggage. A bullock will be laden with the smallest tent in India. Your humble servant, devoted to white horses, will ride an old steed of that colour, which will cost him only one thousand francs (a good horse costs from 3000 to 3500 francs), at the head of his six servants; one carrying a gun, another a skin of water, a third the kitchen and pantry, another with the horse's breakfast, &c., without counting the people with the oxen.

"An English captain of infantry would have five and twenty instead of six. * * * By the vulgar method, that of splendid carriages, grand dinners, and extravagant houses, I should require at least a hundred and fifty thousand francs per annum to maintain the position which I occupy with my 6000 francs, and should probably remain beneath it.

"Let us now talk of dangers. I have obtained statistical accounts of the army, which inform me that the average deaths, one year with another, are one officer in thirty-one and a half in the Madras army, and one in twenty-eight in that of Bengal. It is no great matter, as you perceive. It is true, they do not lead the life of hardship which I am about to do, and they do not go in the sun, &c.; but, as a set-off, they drink a bottle or two of beer and one of wine every day, not to mention grog; and I shall drink nothing but water mixed with a little drop of European or native brandy. * * The tigers seldom say anything to those who do not speak to them;—bears, the same. The most formidable animal is the elephant, but he is excessively scarce in the countries through which I shall pass. After all, I am resolved never to speak to these animals except to whisper in their ear, and never to fire but when sure of hitting. * * * As my letters will have to be jolted across India, they will, no doubt, reach you very irregularly; and afterwards, being secluded far from Europeans, in the solitudes of the Himalaya, I shall be necessarily several months without writing to you. Put then in practice your just theories of confidence. After all, people are not glass to break, nor butter to melt in the sun. * *

"If you hear that Runjeet-Sing has invaded the Company's frontiers, congratulate me on the opportunity I shall have of seeing an Asiatic campaign *en passant*; or if the Himalaya should sink to the level of the plains of Bengal (which is not more probable than an invasion by Runjeet-Sing), remember the hurricane at Bourbon; and congratulate me on the sections of strata, junctions of rocks, &c. &c., which this accident would present to my view."

While on his journey he thus writes:—

"The circuit I made, in order to inspect the coal-mines of the Burdwan district, makes the distance which I have passed over amount to two hundred leagues. I have travelled more than half on foot, the rest on horseback. I set out at four, five, or six o'clock in the morning, according to the phases of the moon and the nature of the country. At noon, two, three, and sometimes not till four in the evening, I arrive at the end of my day's journey, the whole of which, like a native, I pass in the sun. Before mounting, I eat by moonlight a plate of rice and milk well sugared and cooked over night; I put a biscuit in my pocket, and, with this ballast, I accept as a windfall, but without at all depending upon them, all the cups of milk which my cook, sent forward with a seapoy, succeeds in procuring on the road. I dine when I am ready, and when dinner is ready at the same time; if not, it waits, no matter what the hour is. The uniformity of my food fortunately compensates for the irregularity of the hours of my meals: I invariably eat a chicken cooked with a pound of rice, plenty of *ghee* or native butter, detestably rancid, but to which I have got wonderfully used; and some spices according to the fashion of the country, but very sparingly used. This is the dinner of a musselmaun with an income of twelve hundred francs. I drink two large glasses of water with a few drops of brandy, sometimes only pure water. The whole, including the illegal profits of the *khansama* (for my *maître d'hôtel* is my only cook), costs fifty francs a month, half of which is stolen. I was forgetting very unreasonably, for I am this moment drinking a large cup of it, that in the evening I sometimes take tea. In cold weather I find it very pleasant; or useful to keep me awake, when I have worked a great deal, and have an inclination to fall asleep. * *

"Meanwhile, I every day feel myself full of new strength. No Englishman ever thought of living as I do, and it is for this reason that those are dead who attempted to expose themselves to the same physical influences. They laugh at my milk, my *eau sucrée*, my two meals separated by a mean interval of thirteen hours, and my abstinence from spirituous liquors. * * I, in my turn, laugh when they are buried, pickled in champagne, or preserved in brandy and mercury, which their doctors give them by the half pound. * *

"I harden myself against cold as well as heat. I have, it is true, covered my whole body with flannel, but over it I wear only linen or cotton as in summer at Calcutta. Tired of constantly pulling off my stockings to cross torrents, I do not put them on, except at night to sleep in. Over my day-clothes I put on also at night, when I go to bed, a second flannel waistcoat, very thick and very ample, which I keep on in the morning on the march, till the sun renders it oppressive; but the wind is sometimes so piercing, that I do not throw it off. My Pondicherry hat, made of date leaves, and covered with black silk, is more brilliant than ever. In the morning I pull it like a cap over my ears, and find it very warm. It takes every shape that I wish; it is an admirable invention of mine, light, water-proof, firm, &c."

The particulars of his introduction to the Great Mogul we gave on a former occasion—so an account of lion and tiger hunting; but here is a right royal hunt which lasted for a week. We shall give a sketch of one day:—

"We found tents, and, before our encampment, the Rajah of Patiala's seventeen elephants, and four hundred horses, drawn up in battle array. * * They were polite enough to give me the rajah's, with its royal seat of velvet and tinsel. We placed ourselves in the centre of the chain formed by the multitude of these animals, most of them without riders, or carrying the ministers (wakils) of the neighbouring rajahs deputed to our young friend the sub-resident of Delhi. Our cavalry deployed on the wings of this imposing line; and with the rajah's two drums placed in front, beating the royal march, we entered the desert.

"It consists of vast, sandy, salt plains, covered with thorny shrubs, interspersed with large trees here and there, or else grassy steppes. There are no obstacles for elephants: they laboriously tear down the trees which they cannot pass, and the branches which would strike the hunter on their back. Being stopped by the forest, our cavalry was sometimes obliged to fall back, and passed afterwards through the large gap which we had opened; where it could act freely, it formed on each side into a semi-circle, which beat the surrounding space at a great distance, and drove all the game in the plain in front of the elephants. Among us six, we killed hares and partridges by hundreds. A hyena and many wild hogs passing under our fire, were wounded, *as the hunters say;* for they escaped from our horsemen, who went in pursuit of them. We saw troops of antelopes and nylghaus, but without being able to get within gun-shot of them. Lions, not the shadow of one; but we hoped for the next day, and returned at nightfall to our encampment. I was in raptures with the strangeness of this novel scene. I saw more of the East that day than during the whole year I had been in India.

"On our return, we went to the bath and toilet; the bath was a skin of cold water, which a servant spouts with force over your chest and shoulders: the toilet was the lightest cotton garments; and then dinner in an immense tent, lighted up like a ball-room. The bottles fell before us, as the hares and partridges had done in the day-time. I, the only unworthy one, was present at both fêtes; nevertheless I did my best. Water was excluded, the weak-headed and timid drank claret instead—it does not reckon as wine; champagne even is considered only as an agreeable mean proportion between water and wine; this latter name is reserved for the wines of Spain and Portugal. The solid part of the dinner equalled the liquid in elegance and perfection. And in order that nothing might be wanting in the soirée, which lasted till midnight, at the dessert some Persian comedians entered, whose extravagant burlesque obliged us to quit the table, and throw ourselves flat on our backs on the carpet, in order to laugh with less danger. These being dismissed, the dancing girls entered; they sing and dance alternately: nothing is more monotonous than their dance, except their singing. This latter is not without art, and they say that the loud tones, which pierce at intervals through a feeble plaintive murmur, which is scarcely heard, please, in a peculiar manner, those who have forgotten the melody and measure of European music. I am not yet Indian enough for that; but their dancing is already to me the most graceful and seducing in the world. The entrechats and the pirouettes of the Opera appear to me like the gambols of the South Sea savages, and the stupid stamping of the negroes; it is in the north of Hindoostan, however, that these nautch-girls are the most celebrated."

In a letter, dated from "the Valley of the Jumna," May 15, 1830, 2615 metres above Calcutta, he observes—

"The influence of elevation entirely effaces here that of the latitude, 31°, on the climate and its productions. I am encamped under a grove of wild apricot trees, which are only just coming into leaf. The carpet of my tent is, without metaphor, enamelled with flowers; they consist of strawberry plants, which are found everywhere here amongst the grass. The wind brings me the smoke of a large fire, around which my mountaineers are sleeping or rather dozing; its odour is agreeable; it is either a cedar or a pine that they are burning."

His good spirits seem never to have forsaken him, even when harassed with fatigue and subjected to privation: in this letter he mentions, that owing to his cook's iniquities he had fallen short of rice, his only food, and humorously observes:—"My Gorkha havildar, who is my lieutenant-general, by violating the domiciles of the few inhabitants of this lofty valley, found some baskets of potatoes. We had a fine feast; although I ate them with salt, as Bonaparte did artichokes. But if you have your Paul Louis Courier present in your memory, you will recollect that he who was not yet called the Duke of—I know not what—exclaimed, 'Great man! admirable in everything!' Although I relatively am a very great lord, no one paid me the compliment."

Having determined to ascend some of the high peaks of the Himalaya, his men mutinied, and refused to follow him:—

"One only, my gardener, the most stupid and timid of the Hindoos, remained faithful to me. The rest of the band, squatting, in the sun, on a rock which pierced the mantle of snow upon which we had been marching for two hours, became perfectly mutinous, and called to my poor gardener. I did not expect that his fidelity would succumb; and though it is difficult to climb over soft snow, some hundred feet above a certain level, when the rarefaction of the air renders respiration quick and laborious, and exhausts a man at the end of thirty paces, slightly bending my knees, supporting myself with my two hands, and my long and strong bamboo, which moderated my velocity as I needed it, when I made it plough up the snow deeper, I darted like a stone upon the rock of revolt, where the bamboo played another part. The traitor whose voice I had recognized calling the gardener paid for all, and very dearly too. The least weakness on my part—a half measure—would have been the most dangerous of all measures. The culprit being besides the most active, the most robust, and habitually the most evil-intentioned of all, I gave it him so heartily on his shoulders from the first, that he would not have been able to reply, had he made the attempt. * * * Rajpoots, and mountaineers though they are, they took it as true Hindoos; that is, joining their hands, and asking pardon. The one who had been beaten, recovering from his stunning, took the head of the file, holding the end of a long rope, which all the others took in their hands, like a rail, for fear there should be crevices under the snow. Fastened in this way, along with my botanical aid-de-camp, I marched along on the flank of the column like a true shepherd's dog—a toilsome matter in such places—exhausting all the tropes of my Hindoostanee rhetoric to stimulate their fainting spirits. * * But the delays of my march, and its extreme slowness, obliged me to think of returning before I had reached the last crests of rock which rose above the snow, and which are probably the limit of the vegetable zone. * *

"Do not blame too much my violence with the people of my escort. Between the hammer and the anvil, between contempt and servile respect, there is no neutral situation possible. You do not thrash people for not calling you 'your lordship, your highness, your majesty:' now it is the rule in India for the natives never to address the smallest English gentleman but by these titles, the same which they give to their rajahs, their nawaubs, and the emperor of Delhi. * * I ought to be the more jealous about etiquette, as the simplicity of equipment, the hard life I lead, the privations and fatigues I endure along with my people, my dress of common stuff proper for this kind of life, and everything in me and around me, tempts them to depart from it. 'My lord,' therefore, is not sufficient for me; I must have 'your majesty,' or, at least, 'your highness.'

"You would undoubtedly laugh at his majesty, if you were to appear before him, in his dress of white bear skin and long mustachios, an ornament which has a very imposing effect on the scarcely-bearded people of the Himalaya. Fortunately I have no looking-glass to settle the question, and I figure to myself that the reddish reflection, which I perceive on looking down, is only the effect of a false light."

What will our readers think of eating a *Strasburg pâté de foie gras* at Semlah, an unknown desert but a few years since, situated thirteen hundred miles from Calcutta, or a Perigord pie on the Himalaya: here is Jacquemont for our authority:—

"I have the prospect of eating here in four months a *Strasburg pâté de foie gras*, and also a *Perigord pâté de foie gras*, which are not inferior to the *Boulogne pâté de becasses* in their finest season. The Bordeaux vessels bring them every year to Calcutta, where they arrive as fresh as at Paris; and your colleague the artilleryman, my host at present, has just written to the capital, in order that he may regale me with both at our next meeting. Since we are talking of pies, I will tell you that upon the peaks of Mossouri, in the mountains of the Himalaya, another artilleryman, a general, a grey-haired old bachelor, whom you would love to distraction if you knew him, made me taste—taste! I devoured a *pâté de lièvre truffé* and a quantity of *Perigord pâtés de perdrix-rouges truffées*. The proceeding of both is very simple; the one on account of his high rank in the army, and the other on account of his office, have an income of a hundred thousand francs, which diminishes distances in a similar manner, and exercises the action of a sucking-pump on all the good things of Europe, raising them to a height of seven or eight thousand feet above the level of the sea. Why are you not the captain of artillery *aux pâtés de foie gras?* In your absence, know, however, my friend, that the treacherous islander, your compeer, drank your health yesterday with me, and (do not tell our father or Taschereau) that it was not with *vin de Tours*."

Of Semlah, he says—

"Do you not see it on your map? A little to the north of 31° of latitude, a little to the east of the 77° of longitude, some leagues from the Sutledge. Is it not curious to dine in silk stockings at such a place, and to drink a bottle of hock and another of champagne every evening—delicious mocha coffee—and to receive the Calcutta journals every morning?"

In one of our former notices we gave a brief outline of Jacquemont's opinions of the British policy and power in the East; here he expresses himself more fully on this interesting subject, and with it we shall conclude for the present:—

"From the contradictory reports of the different papers, nothing would be more easy, it seems to me, than to deduce the true state of affairs: all of them go to England, and yet the mass of the English public is as ignorant of India as we are in France. Some of the little newspaper scraps which you sent me, to inform me that the Afghans had sent an embassy to the Russian general at Erzeroum, and that the king of Lahore, Runjeet-Sing, was inclined to-

wards the Russians, have excited the mirth of my Indian friends. Here we are precisely a day's march from Runjeet-Sing, and in five days we can see a considerable part of his dominions:—now he is as supremely indifferent to us as the emperor of Japan. The forces maintained by the Company on the north-west frontier, at Delhi, Kurnal, Meerut, Agra, Mutra, and Loodeeana, would be sufficient to invade the whole of the Punjab without any movement of troops in the interior of India. Runjeet-Sing might risk a battle behind his actual line of defence, the Sutledge, and he would afford the English a precious opportunity of annihilating him in half an hour. As for the Afghans, 'a warlike nation,' says your estimable journal, 'which has so many times invaded India, and can bring thirty thousand cavalry into the field,' this is a little too much: the days of Mahmood, and Ghirni, and Timour, are past. The Afghans are very inferior to the Seikhs, and, at most, just strong enough to do battle from time to time with Runjeet-Sing. * * *

"In order to maintain his little army (from thirty to forty thousand men) on a European footing, Runjeet-Sing is obliged to grind his country with imposts, which are ruining it. Several of his provinces are calling for the English; and I do not doubt that some day or other (but not for some years) the Company will extend the limits of its empire from the Sutledge to the Indus. It is not a hundred years since the Punjab was dismembered from it, after the invasion of Nadir Shah, and it naturally forms a part of it: the religion is nearly the same, the language also scarcely differs; and the course of the seasons is the same. But the English will make this conquest only at the last extremity. All that they have added to their territory for the last fifty years beyond Bengal and Bahar, beyond the empire which Colonel Clive had formed, has only diminished their revenues. Not one of the acquired provinces pays the expenses of its government and military occupation. The Madras presidency, taken in the lump, is annually deficient; Bombay is still further from covering its expenses. It is the revenue of Bengal and Bahar, principally of the former, which, after making up the deficiency of the north-west provinces recently annexed to the presidency of Calcutta, Bundlecund, Agra, Delhi, &c., sets the finances of the two secondary states afloat. In France, we consider a hypocritical farce, the excuse of *necessity* alleged by the English for the prodigious aggrandisement of their Asiatic dominions: nothing, however, is more true; and certainly no European government was ever more faithful to its engagements than that of the Company.

" * * * * * * *

"It is always from the English journals that we learn that we are upon a moving soil here; —I assure you that there is not a firmer."

Anatomical Plates, Nos. V.—XV. Edited by J. Quain, M.D. Professor of Anatomy and Physiology in the London University.

Since last we had an opportunity of noticing these plates, they have exhibited a decided improvement in clearness and boldness, in consequence of the artist having, in all instances, the subject itself placed before him. They were originally intended to be merely copies of other plates, which from their scarcity or dearness, might be supposed inaccessible to the student, but it was soon found, that this led to doubt and indecision, the artist often hesitating as to the nature of the parts represented. This of course has been completely avoided by the means alluded to, and the subscribers may therefore congratulate themselves on obtaining a much better work than they had bargained for, and one to which the anatomical and physiological comments of Professor Quain add so decided an importance and value.

ORIGINAL PAPERS

THE VOCAL STATUE OF MEMNON.

Observations on the Discoveries and Opinions of Mr. Wilkinson.

BY MONSIEUR LETRONNE.

Since the publication of my dissertation on the Vocal Statue of Memnon, several literary journals have spoken of a discovery made by Mr. Wilkinson; from which it would result that the vocal phenomenon of Memnon was the effect of deception. According to a letter written by Sir William Gell to Mr. Hamilton, and communicated to the Royal Society of Literature of London, the 9th November, 1833, it is stated that "Mr. Wilkinson found, upon a careful examination of the figure, that the mysterious sounds were produced by means of a sonorous stone *fixed below the breast*, which a person, placed for that purpose *in a concealed niche*, struck with a piece of iron, or other metal."

Subsequently, Mr. Wilkinson read a Memoir on this discovery to the same Society, the 18th of December. An extract of this memoir appeared in the Proceedings of the Society in these terms:—"Among the numerous inscriptions left by the visitors to the Colossus, and which have been learnedly illustrated by Mr. Letronne, in a Memoir published in the Society's Transactions, and more largely in a recent volume of that eminent savant, is one of Julia Ballilla, who compares the sound emitted by the statue to the striking of brass, ὡς χαλκοῦ τυπέντος. Mr. Wilkinson had remarked the *metallic* quality of the sound produced by a blow on the stone fixed below the breast of Memnon, before his attention was drawn to this description. On a subsequent visit to Thebes (in 1830), he was struck with this confirmation of his opinion, regarding the means used for the deception; and he determined on ascertaining if it could be heard by persons stationed near the base, and if any one, totally unacquainted with the history of the statue, would then perceive the metallic ring of the stone. The experiment was accordingly tried upon some Theban peasants, who knew nothing of the nature of the inscription, and were ignorant of the reason for which they were placed below. On being asked if they heard anything, these persons replied, *You are striking brass*;—and the exact similarity of this answer to the testimony of Julia Ballilla, completed the conviction on the writer's mind as to the identity of the sound, and the means formerly used to practise the deception." (Proceedings, &c. p. 27, 8.)

Those who have read my Memoir on the subject, will, I presume, entertain strong doubts with regard to the conclusion which the learned traveller draws from the fact which he noticed. If they will attend to the facts, which, independently of every explanation, are ascertained by the concurrence of the most positive testimonies, they will see that the *sonorous stone*, of which, I contest neither the quality nor the place, cannot account for any of the *historical* conditions of the problem.

It is certain, in fact, first, that the upper part of the Colossus was thrown down when the ancient travellers, from the time of Strabo to that of Pausanias, came to visit it, and heard its voice; —second, that the restoration of it did not take place till after the journey of Hadrian;—third, that the Colossus was silent, or, at least, that no one speaks of it, since that period.

Now, if the sonorous stone in question *is fixed below the breast*, it belongs to the part restored, and consequently did not exist before the restoration of the Colossus took place; that is to say, precisely at the time when the phenomenon was most remarkable. The total silence of the Colossus since its restoration is a proof that the stone of which Mr. Wilkinson speaks could not have been used to produce the effect which he supposes.

If it were supposed that the *sonorous stone* belonged to the *ancient* part of the Colossus, we must admit that it was placed there a short time only before the visit of Strabo, since he is the earliest author that mentions the phenomenon. But, as before stated, no religious notion was then attached to it; the Colossus had not yet received the name of Memnon, so that no one could have an interest in a deception of this kind, the phenomenon being then an accident only without any importance, and which attracted little attention. It would be requisite also to admit, that during all the period in which the jugglery took place, the stone in question stood on the upper surface of the remaining part of the statue; and it may be asked, how could a man come there almost every day without being seen? It was not enough for him to be concealed in the *niche*, he must climb up and down again unperceived. It is impossible, therefore, that such a gross deception could have remained secret during two hundred and fifty years. Nor is it less impossible, that a deception of this kind should have been continued with impunity for such a length of time, when the Greeks only could have a slight degree of interest in it, while the Egyptians, as we know by the most positive proofs, remained strangers to it. These last would naturally have endeavoured to undeceive the credulous, and to expose a contrivance which profaned the statue of one of their ancient kings. For the bare satisfaction of making dupes, who would have dared to impose on the most exalted personages, governors, generals, emperors, who, during two centuries and a half, came to visit Memnon, and heard his voice?

These are some of the historical difficulties impossible to resolve, which the opinion of the learned English traveller presents; there are many other objections, but it would require much time to expose them—these observations are sufficient.

Once more let me observe, I do not mean to dispute the reality of what Mr. Wilkinson has seen, nor to raise any doubts of its veracity: I take his observation as it stands, and I admit that it will not fail to be confirmed by the observations of future travellers. All this being granted then, the only point which I dispute is the explanation which he gives of it. If the sonorous stone really does exist in the situation indicated by him, and is situated behind an aperture contrived artificially, and not naturally resulting from the accidental fall of some fragment, all that I recognize in it, after attentively considering the question, is a comparatively *recent contrivance* to reproduce a phenomenon which had ceased to exist.

The intention of those who, after the time of Hadrian, undertook the gigantic task of rebuilding the Colossus, could have been none other than to make the phenomenon thereby more striking and extraordinary than ever; but they were disappointed in their expectations. The voice was heard no more—a fact which is proved by the absence of any inscription subsequent to the time of Septimius Severus; and by the silence of history on the subject, dating from the same epoch. Now, if we reflect on all that rendered the phenomenon of so much importance, during the period when the struggle between Pagan worship and Christianity was at its height, we shall have no hesitation in admitting, that, to the individuals who had caused so costly a work to be executed, it must have been an immense disappointment to discover, at last, that the desired sounds had altogether ceased; and it will not appear strange that they should have laboured to produce artificially an effect which formerly had been produced they knew not how. Hence the cavity contrived within the restored Colossus, and the sonorous stone placed in the

centre of blocks of a sandstone not susceptible of vibration. But such an apparatus could not long be a secret; it was accordingly abandoned, and the Colossus has remained ever since as silent as ever.

I must finally repeat, that, if Mr. Wilkinson's observations are accurate, the solution of the difficulty here proposed appears to me the only one consistent with the several facts, which an attentive consideration of this question presents to our notice.

Even in this case, the discovery of the learned traveller would still be extremely curious, inasmuch as it would attest the importance which the restorers of the statue attached to the production of the phenomenon, and would show the powerful motives which induced them to undertake its restoration.

SKETCHES OF SOCIETY IN THE UNITED STATES OF NORTH AMERICA.

(Translated from the Morgenblatt.)

In 1813, a German bookseller came to New York. It had been intimated to him, that, if he would come over with a choice collection of books, he would be sure to make his fortune among a people so wealthy, so polished, and so eager after knowledge. Friend M., as we will call him, hastened across the Atlantic with the choicest treasures of European literature. His friends and advisers one and all recommended him to take a store, and advertise the concern. M. had at first a great number of visitors. They wished to see everything, desired particularly to be shown the handsomest modern bindings, and when their curiosity was completely satisfied, some promised to come again when they wanted anything in his line, and others when anything new should arrive. "Is that all?" asked most of them, turning up their noses. All wished to see a map of the United States of North America, or new English Spelling-books: not a creature bought anything, and after three or four busy weeks, M. had abundant time to rest himself. There he sat solitary among his books: he calculated that he should scarcely make the import-duty by them, which, though apparently low, is as high as it can be raised with safety. Once more M. called upon his friends, and solicited their advice. "Advertise your concern in the newspapers," was the universal reply.—"I have already done so."—"Repeat your advertisement every day in every paper." He followed this advice. The advertisements cost upwards of one hundred and fifty dollars, and produced not one.

"I must learn how other people manage," thought M., and went to consult a European friend. He recommended him to sell his books by auction, and to try some other business. "I was brought up to this business," said he, "and am unacquainted with any other: besides, I have seen some of those book sales, and I cannot make up my mind to dispose of my valuable works by the case, at the rate of four or five dollars per hundred-weight; my whole property is invested in my stock."—"You will be forced to do it in the end," said his friend, "and then you must attempt something else. No one here ever prospered in the business which he understood. Look at me, for example: I was a music-master, and should soon have starved; as a custom-house agent I make a tolerable living. The shoemaker, over the way yonder, was a dancing-master; the hair-dresser at the next shop, who looks so sleek and so contented, is a cabinet-maker, who tramped it to no purpose through all the States of the Union; he returned to New York, and preferring drowning to starving, he was on the point of taking the fatal leap, when, as good luck would have it, a sailor thrust a comb and a pair of scissors into his hand, and insisted that he should cut his hair for six cents. Such was his initiation into business. At first he offered his services on the wharfs, and in three years has become the thriving man you see. The painter who made the new sign which you observe over the hair-dresser's door, was originally a Dutch carpenter. Look at that spruce gentleman just going into yon house. He teaches a young lady to play on the guitar, which he knows nothing about himself: he is by trade a saddler; and, to make amends, an Italian opera-singer works in that turner's shop. Last week, the manager of the Park Theatre engaged a ballet dancer at a salary of 2,500 dollars, though it was only last month that he trod the stage for the first time in his life. You must surely have heard what thundering applause his pirouettes have drawn from overflowing houses. But he is a native American, and might, therefore be assured of the unconditional encouragement of his countrymen. He was not long ago a pork-butcher at Cincinnati, where his father is a dealer in hams. His real name is Brown, but, according to the theatrical custom, he has entered upon his new vocation by the name of Gay. Twelve lessons which he took of Convais, the celebrated dancing-master, were sufficient to develope his extraordinary talent. This Convais was a drummer in the French 108th regiment, and deserted during the Spanish war. Some years ago he came as cabin-boy on board an American ship to Boston, where he earned a scanty livelihood as a cooper: he nevertheless married a French dress-maker, who could not get any employment at Boston. In this hopeful condition, they removed to New York; they now teach dancing, and are doing very well. You must have noticed the hair-dresser in the Broadway, opposite to the City Hall, who has set up the six so fantastically attired busts in front of his drawing-room. He was trumpeter to a French Hussar regiment. He endeavoured to get employment here as a groom and a blacksmith; but people would not give him more than half wages, and everywhere required double work. An old French barber from New Jersey then took him as his assistant. The old man soon died, and left young Foissard, (for that was the trumpeter's name,) about one hundred and fifty dollars. With this legacy Foissard returned to New York, and advertised himself in the newspapers by the more elegant and high-sounding name of Charles Martell, as a *coiffeur de dames*, just arrived from Paris. That he has an excellent business, you may see from the appearance of his house, for which he pays a yearly rent of fourteen hundred dollars. I should never have done," he continued, "if I were to mention all the instances I know of people who have not been able to earn a livelihood, except precisely by some business which they knew nothing about. So it is in New York, and so it is throughout the whole Union. In this country the nature of emigrants is totally changed; and, as at the building of the tower of Babel, men, all at once, spoke languages which they had never heard; so Europeans here pursue trades and professions, which, at home, they would never have thought of. But, I must say, it is only one in a hundred that succeeds. Countless is the number of those who are plunged into the most abject misery. He only, who brings nothing with him, and consequently can lose nothing, has a prospect of bettering his lot. Last week M. Vicini set out on his return home: he has prudently sold his stock of Leghorn bonnets to the Fire Insurance Company."

Whoever has lived any time in New York, will not question the accuracy of the facts stated by the Piedmontese; nay, he will even recognize the persons. I, at least, have seen them all, and am able to add several other portraits. Thus, a Neapolitan captain of Gendarmerie, a devoted adherent of Murat's, was driven by circumstances to the New World. Here he tried to subsist, by giving instruction in fencing: but what free-born American would submit to postures which are at first so extremely inconvenient! The young dandies took one or two lessons, and never came again. With the rest of his money, he went to Philadelphia, where he tried the tobacco trade, in which he lost his last dollar. After suffering extreme distress, he at length received some relief from the ex-King, Count Survilliers. Hereupon, our gendarme returned to New York, where he set up an establishment for the education of young ladies, by which he is making money.

Mr. B., the dentist, is a young Englishman who was brought up in a mercantile house in London, and came to America furnished with the best recommendations. He obtained a situation as book-keeper in a great house, which failed in less than a year. He then opened a school, but that scheme was not successful. At length he took it into his head to be a dentist, and in this profession he succeeded beyond all expectation.

The Theatres.

There are three handsome theatres in New York, and a small one, where the actors are blacks. In the principal theatres, there is a distinct place appropriated to the people of colour, that they may not mingle with the whites. As may be supposed, people so fond of liberty lay themselves under very little restraint at the theatre. The gentlemen in the pit set their feet against the benches before those on which they sit, rest their elbows on those behind them, and never take off their hats. On the other hand, it is usual enough for them to pull off their coats, to chew tobacco, and spit all around them. In the boxes, those in the front row, sit upon the parapet, with their backs turned to the house. The ladies are more polite; they are expected to take off their bonnets—just the reverse of the custom among us. Not a creature pays the least attention to what is passing on the stage, unless when an American actor comes forward, or some sarcastic *bon mot* is uttered against the English; and then the thundering stamp of heels expresses the universal applause.

I was once in a box at the Park Theatre, which is the handsomest of the three houses, and frequented in preference by people of fashion. A gentleman entered the box and seated himself beside me. During the performance, he pulled off his shoes, and perched his feet, which were probably too hot, upon the front of the box. In the next box, was a lady with two gentlemen: one of the latter was quietly conversing with the lady; this seemed to give offence to the other. An altercation commenced, and the sensitive gentleman knocked off his neighbour's hat. An *elegant*, who *lay* in the pit with his face turned towards the boxes, cried out, "Don't interrupt the play! Go out to fight!" A constable immediately entered the box, and took away the two gentlemen, together with the terrified lady, the innocent cause of the fray. Such rencontres are the *ton* among the fashionables here. The circumstance was luckily noticed by the fat neighbour on my right, who slipped on his shoes and hastened after them to see how the quarrel would end.

The theatres are private property; they are let at very high rents, but not particularly well attended. And how does the manager contrive to maintain his ground? As well as he can, with his hands full of lawsuits. He engages performers on any terms, no matter how high; on the pay-day he gives just what he pleases; the deficiency is covered by a note claiming damages for breach of contract. This is quite a regular thing, and attended with no difficulty. The actor lives by applause; a high engagement makes a noise and gratifies vanity; the rest follows of course. Engagements with foreigners are in a different predicament. Last winter, a company of Italian singers came to New York,

The manager agreed to give them the daily receipts beyond six hundred dollars, which he reserved for himself. They sang for six weeks, and went their way again in peace, without having ever seen a single farthing. A company of rope-dancers fared still worse: its wardrobe and other effects were attached for its score at a tavern. A few years since, Vestris, the celebrated dancer, and his wife, were engaged to come from Paris for a year. The manager agreed to pay the expenses of their voyage to and fro, and twenty thousand dollars; on the other hand, M. and Mad. Vestris contracted to perform a certain number of times, partly at New York, partly at Philadelphia, Boston, and some other towns, but it was specified that they should dance at the theatre of New York at the time when the newly elected President Jackson should visit that city. The Vestris family accordingly arrived, and had performed several times, when they were made over for twelve representations to the Philadelphia manager, afterwards to a second, and a third. This kind of speculation, though not contemplated by them, could not be objected to. Meanwhile, the President came to New York; Vestris immediately hastened thither, and informed the manager of his arrival. He received, however, no summons to dance. The President departed; and, when the year of the contract had expired, Vestris applied for his money. This demand was answered by the manager with another for twenty-two thousand dollars, as damages, because Vestris had not danced at New York, at the time of the President's visit. Was it to be supposed that he could come forward without preparation, and even unbidden, in a tragedy or any other dramatic representation? No matter—he was sentenced to pay, because he had not literally fulfilled his contract; such are the wisdom, the precision, and the impartiality of the laws. Thus had Vestris danced a whole year in America for nothing; and he deemed himself fortunate that he could escape at night, with wife and child, in a small boat, and gain the open sea, where a vessel was waiting for him to take him back to France; for the constable was already astir to seek and to apprehend him.

Not deterred by this example, M. Achille, another eminent French ballet-dancer, soon afterwards entered into an engagement for himself and his wife. He, however, determined to be particularly circumspect in his contract, and not to forget an iota; and therefore consulted an advocate celebrated for his acuteness; but who can think of everything? When the engagement was drawing towards a close, the music, never good, began to be execrable; the stage was not swept, nay, it was strewed with all sorts of rubbish: in short, it was impossible to dance upon it. In vain did Achille remonstrate; the manager paid no attention to him, and the public laughed. Achille declared, that if the cause of complaint were not removed, he could not dance. "If you cannot dance, I cannot pay," was the answer. An altercation ensued between Achille and the manager; the hot-blooded Frenchman's passion was excited; twenty witnesses were instantly ready to give evidence of violent language; an action for damages was commenced against him; and meanwhile he was still required to expose himself to the public derision, by dancing upon the filthy, slippery boards. This he positively refused to do; and then he was prosecuted for breach of contract. He lost the suit, refused to pay the heavy damages in which he was cast, and was thrown into prison. His wife then took the money which they had saved for their three children in Europe, went to the manager, negotiated with him, and at length obtained her husband's liberation for two thousand dollars.

There is not a vainer people than the Americans; it is only to gratify the national vanity that the managers of theatres engage eminent foreign performers, in which case, indeed, the danger of too great expense is most patriotically obviated by a wise legislation. About art or talent itself, they care not a straw. The wretched orchestra spoils the finest opera; the best singer is scarcely heard for the incessant clambering over the benches in the pit, the general noise, and the continual spitting of tobacco juice; and when ballets are given, most of the spectators turn their backs on the performers. And yet it was deemed indecorous and offensive to the purity of republican manners, when the French female dancers appeared in petticoats reaching only a few inches below the knee, though, at the same time, they wore close drawers—nay, the daily papers sounded an alarm, and scrupled not to declare that the state was in danger—that it was shaken to its very foundations. Madame Vestris and Madame Achille were therefore obliged to appear in petticoats reaching at least to the ancle, and to submit to wear under them white, and extremely wide Turkish trowsers. Such was the metamorphosis required to appease the ferment; it was only on these terms that those females, whose first appearance in the French ballet costume had excited universal indignation, were endured by the public.

The same strict outward decorum is every where observed in the domestic circle. Never is a man allowed an interview with the female inhabitants of the house anywhere but in the parlour, which is constantly open to every one, and can generally be overlooked from the street: neither does the mistress of the house ever speak to a person of the other sex alone. If a visitor comes in, her *help*, in English her maid-servant, sits down with her, and takes part in the conversation. This *help*, moreover, puts on her mistress's bonnet and her shawl, when she goes out walking on a Sunday. Whoever will not suffer such familiarities, must keep black or coloured attendants.

FOREIGN CORRESPONDENCE.

Florence.

Will I have the goodness to tell your friends R— and B— whether they should come to study at Rome or at Florence? Artists themselves here have discussed the question, affirming generally, that the facilities were much greater at the latter place than the former. They ought to know best. But, perhaps, you would like to have the "benefit of my doubts" upon this matter. Of a truth, the only collection of paintings at Rome suitable for study is the Borghese, and that (together with its being as beset with copyists as the British Museum,) can hold no comparison with the Pitti or the Royal Gallery at Florence. Living models, I have also heard, are difficult to be had at Rome. There is a Life Academy, but female subjects are prohibited. There are more pictures purchased at Florence, for though Rome have twice the population, it has ten times the poor; Roman nobles order, now-a-days, only Saints in coloured woodcuts or wax; and foreigners, who are the chief buyers, all pass through Florence on their way to Rome, while many reside permanently here, none there, except for the winter. To be sure, on the other hand, it must be said that the scenery about Rome is better suited for painters, at least better known as painting ground, than about Florence. Besides, the costumes and colours of the climate are richer, mellower, more pictorial, in Romagna. Nowhere, perhaps, is aerial perspective so fine, owing to the redness of the atmosphere, which gives a peculiar warmth and glow to evening and morning landscapes especially. Then its moisture brightens and freshens the herbage wonderfully. A painter has only to retreat some yards from a living mummy in red rags and blue, tottering under a broken pitcher, to find her metamorphosed into the grandmother of all the Graces; cream-coloured husseys, with coarse black hair, become so many Rebeccas at the Well and Ruths in the Corn; drowsing swineherds and sunburnt beggarmen, Apollos in disguise, and sylvan deities. Such is the magic of an ethereal medium, picturesque costume, striking features, and rich complexions!—Then as to sculptors: the Vatican marbles are in greater number, and variety, and name, than the Florence. Classical ruins, too, abound for their benefit, as well as for that of their brethren the painters. So, if you have not reasons enough here for determining the question, perhaps you will find them in fashion, whim, prejudice, which make up what is called the public voice, and that is decidedly favourable to Rome. Artists can live at Rome and Florence I believe about equally cheap, but far better at the last; chambers and studios are to be had here for half the price—as at Rome, there is a drawing school and every other requisite accommodation. Now let your friends of the mallstick and mallet conclude for themselves, if they can, from the above premises. I, being only an idle sort of *val' niente*, am unable to give better information. I should subjoin, however, in mere justice, that the Roman air, thick as it may be with malaria, is considered as the breath of inspiration by foreigners, while to the Romans themselves, both ancient and modern, it has been ever, with respect to the fine arts, proverbially Bœotian. If R— and B— can only get inflated with it, like priestesses with the divine *afflatus*, perhaps they will give birth to so many godlike conceptions.

As the matter stands, there are but few artists of any note at Florence: and this, too, though by the liberality of the Grand Duke whole churches be devoted to their service. Pampaloni, the sculptor, has one house of prayer for his workshop, Ricci another. This is not very reverent, to be sure, but the practice obtains (as we elegantly say with Robertson,) throughout Italy; nothing more common than to see a temple of worship turned into a coach-house or upholstery. It must be recollected, however, that they have not, like our English churches in general, grave-yards about them; appropriation to mortal dust would no doubt have saved them being desecrated, though not appropriation to the deity. Pampaloni is author of two colossal statues in the Piazza del Duomo, representing those renowned fathers of Italian architecture, Arnolfo and Brunelleschi. There is something poetic about their contrasted *pose:* Arnolfo looks straight forward, with huge stony eyes, upon the body of the Cathedral which he erected; Brunelleschi raises his daring aspect to the dome which he piled, the first thing of its sort in Italy. This, of a truth, is doing but poor justice to Arnolfo; it was he imagined the dome, planned it, nay had even built the octagon drum to sustain it, when he died at the last layer. In succeeding him, Ser Filippo heired, along with his noble substructure, the sublime originality of his idea; this, showing him such a dome was possible—that, suggesting how it was to be realized. Many will vault a gulf if they know it can be vaulted, who would not venture without such an assurance. The dome, though sublime, is not handsome, and done on the timid pyramidal principle; it would be curious to know how Arnolfo would have raised it; I believe his designs are yet extant. No one is about to question Brunelleschi's genius; the church of San Spirito and many other buildings in Florence, evince it; but he certainly raises no such mighty mausoleum to himself as the dome which Arnolfo may be said to have thrust upon him. However, the statues are well conceived for effect, and would be what the public statues of great men should, tangible pieces of history, if Arnolfo's eye-grasp were comprehensive instead of confined. But we know how much our historical artists of the present

day luxuriate in the bliss of ignorance. Penny periodicals, and elbow-talk across coffee-house tables, form, I apprehend, the chief sources of their knowledge. Perhaps the foreign amateur, butterfly of the arts as he may be, knows more about Arnolfo and Brunelleschi than their townsman and fellow-artist himself! As to the glyphtic merit of my statues—they belong to that style of ideal, which may be called the unmeaning, and of which the Protomotheca, at the Campidogleo affords so choice a museum of specimens. There is such a topping generality about this ideal of theirs, such a high-flown contempt for natural detail, that you can make nothing of them, human or divine, but laughing-stocks. So many busts cut out of Dutch cheeses, and left to soften in a hot sun, would have just as much individuality and character. Canova's 'Pope Pius' and 'Cimarosa' are almost the sole exceptions; all the others scarce fit to give shape to periwigs. I am serious! Our Florentine artist seems to have gotten out of his proper element in this style; no doubt by way of being grandiose and classical. His studio proves him to be rather a naturalista. There you see not a few statues erring, if I may so express myself, the other way from those of Arnolfo and Brunelleschi—*lineatim* copies of nature—not ideal enough. But this is a fortunate fault in Italian artists, who have been a long time still more desperately given to the classic than even their tutors, the French. Pampaloni's 'Kneeling Child,' which I saw two years since at the Exhibition, and yesterday at the Grand Duke's palace, is a clever work in the best of the two wrong ways aforesaid.

Ricci, a pupil of Canova's, is lay proprietor of another church, and historic sculptor in chief at Florence. He has got the two fine fragmentary groups of Menelaus and Patroclus to restore. These have long lain at Florence, and are similar, in all but excellence, to that group standing at Braschi corner, Rome, which goes by the famous misnomer 'Pasquin.' Ricci has, with much judgment, made a cast from both groups, uniting their respective merits, inasmuch as the upper part of one, and the lower of the other, are superior each to that of the companion. I doubt there being quite so much judgment in restoring the original statues. See how even the mighty-handed Michael failed in restoring the 'Tigris' of the Vatican! See what a file of thick-lipped Venuses and snuffy Muses, awkward Apollos, lumbering Mercuries, we have got by the new sets of noses, mouths, legs, and so forth, which modern artists have stuck on to order! The genius of Death restored as a Cupid! Meleager turned into Antinous, and the Indian Bacchus into Plato the philosopher! Is there a more revolting object in sculpture than that vulgar modern chitface on the Callipigian Venus, writhed so affectedly round to admire what it could not see, unless the promontory of beauty behind were like that of a Hottentot? What is it makes the connoisseur turn away at times, in disgust, from the Medicean Venus herself? What but her Berninesque fingers? Do, gentlemen stone-cutters, let our hapless antiques alone! or rather, you titled dillettantes, protectors of the fine arts, forbear giving orders for disfigurements by way of restorations, to please your falsetto tastes, got in ladies' boudoirs or alabaster shops. If we must have them disfigured, let it be by the hand of accident, not of impotence. For my own part, at least, I had rather have a fine antique, with all its mutilations, than a single modern amendment. Ricci is most known by his 'Monument to Dante,' in the church of Santa Croce. Flaxman ought to have done this. There is not much spine about Canova, and his pupil is a kind of spine-drawn Canova—feeble to excess. Nothing can be weaker than the Dante; weak by its very weightiness. The scholar, like the master, has a strange fancy to represent grandeur by size, to estimate it by the stone. Canova-like, he has a hulking jade by way of a genius, with the arms and chest of a Glumdalclitch, dropping millstones from her eyes upon the steps of the monument. This is not greatness, but grossness! Dante himself, in size and shape of his countenance, somewhat resembles the beak of an ancient galley, or a battering-ram—coarse, clownish, undignified, and unintellectual. Every feature caricatured, as a substitute for character. The meagre, mortified Tuscan poet displays likewise, under attire little more Persian than poor Tom's blanket, a deal of unseemly brawn and indifferent modelling. Ricci succeeds better in the *gentil* than the sublime. His 'Pureté,' for Col. Braddyl, is reputable to the taste of both author and purchaser. The 'Morality and Mechanism,' on his monument to Mazzoni, are mannered, but not without merit. 'Venus and her Doves' I cannot away with, though meant for a miracle, it is so very à la Canova, yet so very un-Canova-like. I mean that it has all the *fade* grace, and affected *tournure* of Canova, without his beauty of workmanship and frequent elegance of detail.

But I must tell you that Bartolini's 'Bacchante,' for his Grace of Devonshire, is the present Cynosure of wondering eyes at Florence. You know this artist's humiliating bust of Lord Byron,—so true and *turkey-foreheaded!* Its odd set eyes and cross conformation have not prevented hundreds of sitters being done by the undoer of his lordship's reputation for beauty. Bartolini's busts are clever. But I suppose he would not thank me for this commendation unless I add a doxology about his Bacchante. The figure is, in truth, very well modelled by members, a much simpler thing than to present a well modelled *ensemble*. What I find chiefly in abeyance is sentiment, and really we moderns have nothing else for it than sentiment. Unless we can produce such exquisite pieces of mere workmanship as the ancients did (which it is not probable we shall with our gusto for money-getting), we should give sentiment, or good-bye to immortality. Well then, our Bacchante is a stout, broad-fronted piece of woman's flesh, with somewhat of a *retroussée* profile, expressive of nothing in the world but a state of good health and thoughtlessness. Mark! I don't want a pensive Bacchante, in the pip or the atrophy, by way of being sentimental; but Signor Bartolini's is, in fact, his hired model reduced to fair proportions, and with less contemplation in her countenance, or luxurious reverie, or whatever she ought to have there, than is in that of a well-fed, ivy-crowned, sacrificial heifer chewing the cud on a lair of clover. "Pooh!" you'll say, "this is mere running a-muck at all you meet!—Surely the Duke of D. would not give 500*l.* for a she ox were she *Io* herself in alabaster!" Well; all I can say is, the Bacchante, or Io, or whatever she is, will soon be in England, and then you can judge for yourself. I may be atrabilious, or squeamish, or purblind in opinion, or what you please. No great matter! Will it bring on the last conflagration? Bartolini's 'Bacchus' is a most praiseworthy attempt to return from the pseudo-Greek or false ideal to the natural. If the artist had called his figure little Beppo the vintager, instead of Bacco the god of wine, it would have been all well. Such a starveling would scarce represent the god of vinegar. I cannot speak of Bartolini's other statues; you would think I took a delight to depreciate: by my love for all that is beautiful, I feel *repugnance!* It is that love which makes me write with such bitterness of spirit about their degradation.

You will not expect me now to make good my promise about Benvenuti, the painter. I could not say one favourable word for this *primo frescante* of Italy. Except,—that his famous Salon at the Pitti is, to ninety-nine out of every hundred visitors, the finest room there, indeed better than all the six of old masters together; and that he gets 40,000 crowns for painting the Medicean cupola at San Lorenzo. There! there you have the opinion of the world, and the Grand Duke's, what do you want with mine? Bezzuoli is another sun, in the sister sphere of oils—whom the Italians adore with the fervour of ancient fire-worshippers; *il nostro Bezzuoli* they call him, as if all the rest of the globe wanted to scramble him away from them; as if he were to make Italy a flying island, that should soar above the whole despicable ball! How you would stare at one of this man's *chefs-d'œuvre* in the Pitti! My wonder is, that the genius of Italian painting does not die in despair before it.—With all his eccentricities, our compatriot Wallis is the best painter at Florence. Full of enthusiasm, he paints as he talks, a little in the wind: but he has originality, if not poetry, about him, and power in his art, if not masterdom over it. It is a foolish theory (though countenanced by Locke), that poetic genius and *judgment* are incompatible: they are inseparable; and according to the proportion of the latter is the purity of the former. I have heard Wallis's colouring praised by artists; to me it is harsh, mannered, and cold,—perhaps the reason so many of his works go to Russia. Wallis junior's colouring is quite continental as well as himself; I suppose I have seen none of his fine pictures. He has a Correggio, indeed, which ought to be had by England.

OUR WEEKLY GOSSIP ON LITERATURE AND ART.

We some time since announced that Sir Thomas Lawrence's unrivalled collection of drawings by the old masters, which government had more than once been in treaty for, had been purchased by Messrs. Woodburn. We have been assured that, in the first instance, it was proposed to the Messrs. Woodburn, that, if they became the purchasers, their debt should be deducted from the purchase-money; but this was declined. They were, it appears, anxious that the collection should be secured to the nation, and have, we understand, offered, even now, to hold it sacred for that purpose, and to part with it to the government in portions, as money can be spared from the Treasury; and as the drawings are all marked with Sir Thomas's stamp, in the possession of his executor, no mistake as to identity can possibly occur. We cannot but express a hope that this last opportunity will not be lost. We have been further informed, that, by the Exhibition of Waterloo Gallery, above 3,000*l.* was raised for the benefit of Sir Thomas's relations.

Mr. Allan Cunningham having completed his edition of Burns, has, we hear, turned his attention to the Lives of the British Poets, for which, we know, he has been many years gathering materials. No complete work of the kind exists. The valuable biographies of Johnson, come down but to the days of Gray and Collins, and reach no farther back than Cowley: we want Chaucer, Spenser, Shakspeare, and Jonson among the older chiefs of song, and Goldsmith, Chatterton, Cowper, Burns, Byron, Shelley, Scott, and Coleridge, among other masters of later times. The Lives by Dr. Johnson, will be included, with notes; and it is proposed, by introducing Dunbar, Douglas, and Lyndsay, to connect the days of Chaucer with those of Spenser, and thus render the History of our Poetic Literature unbroken and complete. It is intended to publish the work periodically; and four or five portraits from the most esteemed pictures, will illustrate each volume.—Mr. Sharon Turner too is, we are happy to hear, preparing a second volume of his 'Sacred History of the World,' which will be published about Christmas.

The Zoological Society have just completed, and are now exhibiting at the Museum, in Bru-

ton Street, a noble collection of the family of woodpeckers, consisting of 120 species, and 230 birds. The whole arranged in one large case, and well worth a visit.

We hear that the Chevalier Neukomm is at Liverpool, drilling the chorus preparatory to the Birmingham Festival. Much is expected from this meeting. The Town Hall is said to be a magnificent room, and the new organ the largest instrument in the kingdom.

We confidently hope that our readers will be satisfied with the Report we this day present them of the proceedings of the British Association. Still something remains to be done by way of filling up the outline; and we yet hope to communicate the substance of many important papers, the reading of which could only be recorded on this occasion. The two most important suggestions made by the Council, at the close of the meeting, were, that the Association earnestly request his Majesty's Ministers to complete the Ordnance Surveys, and also to take measures for having Magnetic and Meteorological Observatories established in Great Britain.—We have much pleasure in stating, that on the last day of the meeting the Town Council of Edinburgh presented the freedom of the city to Sir Thomas Brisbane, Messrs. Arago, Moll, Dalton, and Brown.

FOURTH MEETING OF THE BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

[*From our own Correspondent.*]

In our former number we stated the proceedings of the Association down to Tuesday night, and mentioned the prodigious and unexpected accession of new members. This prosperity brought with it many counterbalancing evils; all the arrangements of the managing committee were disconcerted. The meetings in the Assembly Rooms were not merely crowded to excess, but members were excluded, and forced to promenade the lobbies and staircases, hoping that heat and pressure might compel the ladies to resign their posts, and afford them an opportunity of hearing the lectures, or seeing the speakers. But they had badly calculated the powers of female endurance, and the love of science possessed by the ladies of Edinburgh; able-bodied philosophers gave way, and left posts in which they were boiled, literally boiled—but not a lady stirred, nay, not a single lady exhibited a sign of uneasiness. A greater evil was, that the Association entirely lost its principle of unity; the sections became absolute divisions, and attention to one department precluded all possibility of knowing what was doing in any other. The general committee became what the Association had formerly been, and as this was not open to gentlemen connected with literary journals,—an evil not discovered until it was too late to be remedied,—it became utterly impossible to obtain anything like a general view of the proceedings. It was hopeless to seek for aid from the secretaries, their labours were already almost beyond human power. On Thursday it was found necessary to appoint sub-sections for Geography and Practical Physics, which of course produced a greater disruption; everybody felt the evil, and nobody could devise a remedy. If, then, we fail to give a general view of the proceedings, it must be remembered that the great defect of the present meeting was a want of generalization. Before entering into any detail of the business done in the Sections, we must mention a circumstance which provoked not a little of angry discussion.

The British Association promulgated, through their Edinburgh committee, printed regulations of admission, which, among other things, contained the following provisions:—"Members of royal and chartered scientific institutions are entitled to become members on payment of the fee," and that persons "not qualified as above" must enrol their names and be *approved* of by the committee. The Royal Physical Society of Edinburgh was instituted in 1771, and incorporated by royal charter in 1788, for the cultivation of the physical sciences. It is therefore not only royal, but chartered and scientific, and its large library consists almost exclusively of books on science. Several of the members applied for admission to the British Association, in virtue of their connexion with the "Royal Physical," but were required to put down their names as ordinary candidates. The senior president was apprised of these facts, and on requisition corresponded with the secretary of the Association on the subject, and, after some deliberation, the following interpretation of the printed laws was communicated to him in writing:—"That, after 'royal and chartered scientific institutions,' there should be understood the words 'publishing Transactions.'"

We asked for some explanation of these proceedings, and were informed that the Royal Physical Society had degenerated into a debating club for young students,† and had consequently only a nominal claim to be placed on the same level as other chartered bodies; but we understood that the strict letter of the regulations would have been observed, had not the influx of members to the Association so greatly exceeded all expectation, that the managing committee were forced to devise limitations. We mention this as an act of justice, because the rejection of the claims of the Physical Society has been by some attributed to political motives, a charge which close inquiry has shown to be groundless.

The programme of the subjects to which the attention of the Association was to be directed during the week, was read on Monday night by Professor Forbes. The following abstract of this document, which we extract from the *Scotsman*, will serve as a proper introduction to the proceedings of the sections.

The character of the Association, he said, may be considered as *unique*. It is not to be confounded with those numerous and flourishing institutions which have sprung up, especially of late years, for the simple diffusion of scientific truths. Such *diffusion* does not even, properly speaking, include any attempt at *extension* or accumulation; if in many cases it does promote such extension, it indirectly, and beyond a doubt, has sometimes had the opposite tendency. The intellectual wealth of mankind is no more increased by this operation than is the weight of the precious metals under the hand of the gold-beater. A greater display may indeed be attained, and a more commodious application to the useful and the elegant purposes of life; but for actual increase of the stock which may hereafter be fashioned with ease and expedition by the hands of a thousand artificers, we must recur to the miner toiling in his solitary nook, and to the labourer who painfully extracts some precious grains from the bed of the torrent.

The migratory Scientific Associations of Germany and Switzerland—to which we gratefully acknowledge that our British one owes its rise—embrace only one class of the objects to which we have above alluded as characterising this body. Their aim was simply to promote the intercourse of scientific men, and to diffuse a taste for the prosecution of science. Their existence is not permanent—they execute no functions but for the moments during which their members are once a year assembled—they regard not the past, and have no cares for the future—they merely receive and consider the communications which the zeal of individual members places in their way. Such was proposed to be the character of the body this day assembled—an imitation of the foreign meetings having been suggested by some individuals engaged in scientific pursuits, amongst whom Sir D. Brewster was conspicuous; but the original idea, and the much more signal merit of bringing that idea to bear, of establishing a permanent society, of which these annual re-unions should simply be the meetings, but which, by methods and by influence peculiarly its own, should, during the intervals of these public assemblies (whilst to the eye of the world apparently torpid and inactive), be giving an impulse to every part of the scientific system, maturing scientific enterprise, and directing the labours requisite for discovery;—the clear perception of the practicability of all this, and the discovery and suggestion of methods for its fulfilment, were due to one individual, and to one alone; and I shall be borne out by all those who have closely watched the progress of this Society from its birth to the present hour, when I say, that not only for the idea generally, and the modes of carrying it into effect, but for the actual construction of the machinery in its whole details, we are indebted to the almost single-handed exertions of Mr. William Vernon Harcourt. If we now turn from the professions to the *acts* of the Association, we shall find gratifying proof that these sanguine anticipations were not chimerical; and that this primary machinery, not destined itself to do the work desired, but to construct the *tools* requisite for its performance, was wanting neither in efficiency nor in permanence. The first and most signal proof which we can cite, is the production of those reports on the progress of science, which appeared to the founder of the Association one of the most important objects of such an institution, and one which, beyond all dispute, no existing society could have attempted. The second volume of reports has amply justified the expectations with which it was hailed; and whilst the first was chiefly occupied with reports upon great and leading divisions of science, we have here several happy specimens of a still greater division of labour, by the discussion within moderate limits of some particular provinces. Thus Mr. Taylor has treated of one particular and most interesting question in geology—the formation of mineral veins—one of the most important, in a theoretical point of view, which could have been stated, and which, from its intimate connexion with commercial speculation, might have been expected in a country like ours to have been more specifically treated of than it has been. It strictly belongs to the dynamics of the science, to which, since the time of Hutton, but little attention has been paid until very recently. By the exertions, however, of Mr. Carne, of Dr. Boase, and Mr. Henwood of Cornwall, whose researches are to form one point of discussion in the Geological section at the present meeting, that electric agency was concerned in the disposition of metalliferous veins can scarcely be doubted, and the connection between electricity and magnetism, now so fully established—the connection between metalliferous veins and lines of elevation, and between the latter and the isodynamical lines of terrestrial magnetic intensity, as suggested by Professor Necker of Geneva—point out a bond of union between this subject and that of terrestrial magnetism, on which we have a report by Mr. Christie, where the very interesting direct observations of Mr. Fox of Falmouth, on the electro-magnetic action of mineral veins, are particularly noticed. Mr. Christie's theory of the diurnal variation of the needle, which he is desirous should be submitted to the test of a laboratory experiment, is likewise intimately connected with the actual constitution of our globe. The whole subject of Terrestrial Magnetism is one of the most interesting and progressive of the experimental sciences. The determination

† We heard afterwards, on pretty good authority, that one of this body put after his name, as a claimant for admission, M.R.P.S., and that the Committee had some difficulty in discovering that these cabalistical letters meant Member of the Royal *Fizzical* Society.

of the *direction* of the magnetic energy by means of two spherical co-ordinates, termed the variation and the dip, and the measure of the *intensity* of that force, are the great objects of immediate research, as forming a basis of theory. The existence of four points on the earth's surface, to which the needle tends, has long been known; and the position of two of these (in Northern Asia and America), has recently been elucidated by the persevering efforts of Professor Hanstein and Commander Ross. The precise numerical determination of the elements just alluded to, acquires a deep and peculiar interest from the multiplied variations which they undergo. Not only are these elements subject to abrupt and capricious changes, which Baron Humboldt has termed *magnetic storms*, but gradual and progressive variations are undergone at different hours of the day, at different seasons of the year, and throughout longer periods, which may even perhaps bear a comparison with the sublime cycles of Astronomy. Natural History forms a more prominent subject in this volume than in the last, though the reports of Professor Lindley "on the principal questions at present debated in the Philosophy of Botany;" and of Dr. Charles Henry "on the Philosophy of the Nervous System," refer only to particular departments of widely extended subjects, which are again to be resumed in more general reports, undertaken for the present meeting,—that by Mr. Bentham, on Systematic Botany, and by Dr. Clarke, of Cambridge, on Physiology in general.

We cannot but remark with pleasure, that one of the points for inquiry, particularly insisted on by Professor Lindley, that of the influence of the chemical nature of soils, and of the excretions of plants, was taken up at an early period of the existence of the Association, by one of its most zealous supporters, Dr. Daubeny; and that, in reference to the review by Dr. Henry, of the labours of European physiologists, we may quote, as a national honour, the discoveries of our distinguished associate, Sir Charles Bell.

On the general connection and occasional apparent opposition of *Theory* and *Practice*, I would refer to some very pertinent remarks in the address of Mr. Whewell, at the last meeting. The importance of carrying on both simultaneously and independently, and of looking to our increased knowledge of both as the only sure means of ultimately reconciling discrepancies, has been manifested by the desire of the council of the Association to procure two distinct reports on the Theory and Practice of Hydraulics, which have been drawn up with remarkable perspicuity, and within a small compass, by Mr. Challis and Mr. Rennie; both these gentlemen have shown their zeal in the objects of the Association, by promising to continue their valuable labours. Mr. Rennie, on that part of his subject which relates to the motion of fluids in open channels, and Mr. Challis on some of those exceedingly interesting branches of theory altogether modern, which physically, as well as in their mathematical methods, have the closest analogy to that case of the motion of the fluids treated of in the present volume, namely, the Theory of Sound, and the intimate constitution of liquids. When, in addition to these reports, we shall have received that undertaken by Mr. Whewell upon the mathematical theory of Magnetism, Electricity, and Heat, we shall undoubtedly possess the most complete outline extant, of a department of knowledge entirely of recent date. In the science of Hydraulics, indeed, some progress in theory has accompanied the increase of practical information, at least since the time of Newton, but in the other strictly *practical* report of the present volume, that of Mr. Barlow, on the very interesting subject of the strength of materials, little or nothing has been done of much theoretical importance since the days of Galileo. Circumstances, which it would be easy to point out, prevent our setting out, except in rare cases, from unimpeachable data; but several very interesting conclusions of general application are derivable from well-conducted experiments, and the Association may claim some credit for having brought into general notice the ingenious investigations of Mr. Hodgkinson of Manchester. One report, and that the longest which has ever been printed by the Association, remains to be mentioned;—it is by Mr. Peacock, on the present state of Mathematics. When we consider the vast extent of the subject, and the extremely limited number of persons, even in the whole of Europe, capable of undertaking it, we must consider the production of a work of so much labour as the present, which, as yet, is incomplete, but which the author has promised to resume, as the best trophy to which we can refer in proof of the entire efficiency of the Association. Were these annual reports the only fruits of the labours of this Society, there would be no reason to complain. But yet more specific results of its impulsive action on science may be quoted.

The questions suggested by the reporters and others, recommended for investigation, have met with ready attention from several individuals capable of satisfactorily treating them. Professor Airy has himself investigated, from direct observation, the mass of Jupiter, suggested as a desideratum in his report on Astronomy; and, since the last meeting of the Association, has confirmed his first results by new observations, which give almost the same mass by the observed elongations of the satellites, as had been deduced from the perturbations of the small planets by Jupiter. Hourly observations of the thermometer in the south of England have, in two instances, been commenced; and we are assured that the same desirable object is about to be attained by the zeal of the committee in India, where the Association has established a flourishing colony. A series of the best observations, conducted for ascertaining the law which regulates the fall of rain at different heights, has been undertaken at the suggestion of the Physical section, by Messrs. Philip and Gray, of York, which have been ably discussed by the former gentleman, in last year's Report, and have since been continued.

A regular system of auroral observation, extending from the Shetland Isles to the Land's-end, has been established under the superintendence of a special committee, and specimens of the results have been published. Observations on the supposed influence of the aurora on the magnetic needle, have likewise been pursued in consequence of this proceeding. The conditions of terrestrial magnetism in Ireland have been experimentally investigated by Professor Lloyd. An important inquiry into the law of Isomorphism has been undertaken by a special committee, which has likewise reported progress; and an elaborate synopsis of the whole Fossil Organic Remains found in Britain is in progress, under the hands of Professor Phillips. Many specific inquiries are besides going forward, under particular individuals, to whom they were confided; whilst it is not to be doubted that numberless persons, many of them perhaps new to the world of science, are at this moment pursuing investigations recommended in general terms in one or other of the publications of the Society. To others the Association has not scrupled to commit a portion of the funds at their disposal, for the purpose of pursuing objects which required an outlay which might be deemed unreasonable by individuals. Among the most important of these is the collection of the Numerical Constants of Nature and Art, which are of perpetual recurrence in physical inquiries, and which has been confided to the superintendence of Mr. Babbage. When objects of still more peculiar national importance presented themselves, the Association has fulfilled its pledge, of stimulating government to the aid of science. Five hundred pounds have been advanced by the Lords of the Treasury towards the reduction of the Greenwich Observations, at the instance of the Association; and more recently the observations recommended by the Committee on Tides have been undertaken by order of the Lords of the Admiralty, at above 500 stations on the coast of Britain. Individuals, as we have said, have been stimulated by the influence of the Association, but so may nations and great bodies of men. Its published Proceedings have found their way into every quarter, and are tending to produce corresponding efforts in distant lands. Our reports on science have produced some very interesting counterparts in the literary town of Geneva. America has taken the lead in several departments of experiment recommended by the Association; and the instructions for conducting uniform systems of observation have been reprinted and circulated in the New World. We must likewise consider it as an especial proof of the influence and importance of the Association, that a report on the Progress of American Geology has been undertaken and executed by Professor Rogers of Philadelphia. Similar contributions from some other foreign countries have been promised, which will extend the utility of the Association, by making us acquainted with the more characteristic state of science in the various parts of Europe. Nor can we fail, on the present occasion, to consider as a most auspicious promise of the future success of the Association, that the distinguished Secretary of the Institute of France has not only honoured this meeting by his presence, but has promised to interest that powerful body on behalf of the important objects contemplated by the Association, which its co-operation might effectually secure. The formation of a Statistical Section at Cambridge was the prelude to the establishment of a flourishing society, which acknowledges itself the offspring of this Institution, and which promises, by a procedure similar to that introduced by the Association, to advance materially the greatly neglected subjects of British Statistics.

After some further observations, the Professor stated that the Association confidently anticipated the most brilliant results from the exertions of its members.

We shall now proceed to detail the labours of the Sections, deferring to the conclusion of them the history of the evening meetings.

PHYSICS AND MATHEMATICS.

Tuesday.—Dr. Lloyd, Provost of Trinity College, Dublin, in the chair. Prof. Whewell read the report of Mr. Challis, on the theory of capillary attraction. Prof. Moll, of Utrecht, mentioned that some remarkable experiments made by M. Lenck, had been omitted by the reporter. Prof. Whewell showed that the report contained some valuable information respecting the constitution of comets; he examined the conclusions of M. Poisson, respecting the variation of the density of the fluid in capillary phenomena, and the atomic constitution of bodies generally. Prof. Hamilton stated that the *atomic discontinuity*, considered by M. Poisson as necessary, in order to the physical explanation of the phenomena, did not appear to him necessary to the mathematical investigation of their laws. M. Arago examined the theories of La Place and Poisson on molecular action, and said that Poisson's conclusions respecting the changes of density near the surface of fluids might be experimentally tested by the observation of the angle of complete polarization at their surfaces. Some valuable observations on capillary phenomena, were also made by Prof. Stevelly of Belfast.

Prof. Powell read a paper on the repulsion produced by heat, as established by the contraction of Newton's rings, when heat is applied to the glasses. Profs. Stevelly and Forbes confirmed the accuracy of Mr. Powell's results, from their own experience. Prof. Whewell doubted the identity of the operation of heat in the vibrations of heated bodies, and in the phenomena described by Mr. Powell.

A letter from Mr. Hailstone was read, which accompanied a table of barometrical observations taken at short intervals. Prof. Forbes said, that the momentary oscillations of the barometer had been noticed by other observers, and seemed disposed to support the existence of atmospheric waves, which the author had doubted.

A letter from Mr. Christie, containing an account of a remarkable meteorological phenomenon was read; it appeared, however, that similar phenomena had been seen and described before.

Wednesday.—Prof. Lloyd read a portion of his report on Physical Optics. M. Arago said, that though he would feel it a just ground of national pride, to claim for his countryman, M. Fresnel, the discovery of the hypothesis of transversal vibrations, yet justice compelled him to state, and he did so on personal knowledge, that the original proposer was an Englishman, Dr. T. Young.

Prof. Whewell having read a paper from Mr. Challis, containing theoretical explanations of some facts relating to the composition of the colours of the spectrum; added some observations regarding Sir John Herschel's explanation of dispersion according to the undulatory theory. Sir D. Brewster objected to this explanation, dwelling principally on the phenomena of dark bands in the light transmitted through nitrous-acid gas, and their alteration with the increase of temperature. Prof. Powell after having read a paper on the achromatism of the eye, renewed the subject of the undulatory theory of light, which was discussed at considerable length.

Prof. Phillips made his second report of the result of twelve months experiments on the quantity of rain falling at different elevations above the ground. Mr. Howard objected to Professor Phillips's mode of registering by average results. The thanks of the meeting were voted to Mr. Phillips, who in reply ably answered the objections of Mr. Howard.

Prof. Stevelly read a paper entitled an attempt to connect some well-known phenomena in meteorology, with well-established physical principles. The questions discussed in this paper were, 1, The nature, origin, and suspension of clouds, and the immediate effect of their formation; 2, The manner in which rain is produced, and the immediate effect of its production; 3. The manner in which wind results from the formation of cloud and rain, and 4, The origin of hail.†

On *Thursday*, a sub-section was formed, of which Mr. Brunel was appointed President. At the principal section, Mr. Rennie presented the second part of his report on Hydraulics, containing the application of the principles of that science to the subject of rivers, which he illustrated by the effects which the removal of old London Bridge had produced on the river Thames.

Prof. Hamilton then gave an account to the meeting, of a new method in Dynamics. After a brief review of the progress made in dynamical science, especially by Galileo, Newton, and Lagrange, he stated that the problem to be solved was "the determination of the three co-ordinates of each point of the moving system as a function of the time." He mentioned the limitations of previous solutions, and proceeded to state his own method; he said, the solution may be made to depend upon a certain function of the initial and final configurations, analogous to that which he has denominated a characteristic function in Optics. By this means, the whole problem is reduced to the determination of this function. He then stated the degree of success that had attended his own investigations.

Prof. Phillips communicated a paper on a new form of the dipping needle, constructed so as to correct the error of the centre of gravity. A short paper from Mr. Jordan, on the mode of suspending the magnetic needle, so as to observe variations in the direction and intensity of the earth's magnetism; the proposed method was not very intelligible, and the advantages to be derived from it, less so.

Prof. Lloyd gave an account of magnetical observations undertaken in Ireland, at the request of the Association, and of a new method of observation which he has employed. Dr. Robinson, V.P., stated some very great disadvantages belonging to the Edinburgh Observatory on the Calton Hill; he recommended that the present building should be changed into a magnetic observatory, and the astronomical instruments taken to some more favourable position. Sir D. Brewster, in confirmation, stated that a rapid process of destruction had taken place in the object-glass of the Transit instrument. M. Arago stated that considerable accuracy might be obtained in observing the dip of the magnetic needle. He said, that when the instrument was furnished with a micrometer, and the necessary cautions observed, he found it adequate to the determination of *the diurnal variation* of the dip.

Mr. Saumarez read a paper on Light and Colours, containing his *peculiar* views on their nature and origin; they were so very peculiar, that they will probably remain confined to the gentleman himself.

At the sub-section, which was formed for Practical Physics, Mr. Dent exhibited a chronometer with a *glass balance spring*, another with a pure palladium spring, and tables of their rates of going in several variations of temperature.

Mr. Adams described a sextant telescope of peculiar construction. Mr. Ramage exhibited a model of a projected reflecting telescope of greater magnitude and higher powers than any yet attempted. Mr. Cooper (M.P. for the county of Sligo,) stated that a reflecting telescope of very superior power had been constructed for him by Mr. Grub, of Dublin, at one-fifth of the usual cost, (See *Athenæum*, No. 339,) and stated that very great advantages would result to astronomical science from that able mechanist's inventions.

Mr. A. Gordon exhibited Maritz's modification of Fresnel's polygonal lens, and strongly recommended its adoption in light-houses, where parabolic reflectors are not indispensable.

The subjects introduced on the last day of meeting were very miscellaneous. After Dr. Knight had given an account of the method of rendering the vibrations of heated bodies visible to the eye, Mr. Russell read a very able account of some experiments on the traction of boats on canals at great velocities.

Sir D. Brewster detailed the result of some experiments on the effects of reflexion from the surfaces of crystals that had been altered by solution, and exhibited some very singular forms to the meeting.

Mr. Graves presented a paper on the theory of exponential functions, illustrating one which he had previously printed in the Philosophical Transactions. Professor Hamilton explained a new method of contriving imaginary quantities, and the principles of a theory which he denominated 'The Theory of Conjugate Functions.' He said that, by the aid of this theory, he had confirmed the results obtained by Mr. Graves.

Mr. Lang stated the results of some investigations which he had made on the nature of the curves described by vibrating wires fixed at one end, and exhibited drawings of the curves. The same gentleman noticed some properties of the successive integer numbers, tending to facilitate the discovery of those that are prime.

Dr. Williams read a paper 'On Sound.' Professor Forbes described the sympiesometer, an instrument invented by Mr. Adie; he stated, that he had introduced a modification, by which a correction could be obtained for temperature.

Mr. Campbell gave rather a confused account of his views respecting antilunar tides.

Mr. Dick explained a new construction of an achromatic object-glass for telescopes, and exhibited the instrument. Sir T. Brisbane mentioned, that a species of sand had been discovered at New South Wales supposed to possess some properties that rendered it peculiarly valuable for glass of a superior quality for optical purposes.

The Section concluded its labours with the reading of a paper, by Dr. Robinson, 'On the Visibility of the Moon during a total Eclipse.'

At the sub-section, Mr. Murray described an apparatus for communicating between a stranded vessel and the shore. Mr. Adams exhibited a new case of the interference of sound. Mr. Dick described a new suspension rail-way which he illustrated by numerous drawings. Mr. Brunel exhibited a model, and described his method of constructing arches. Mr. Adie read a very curious and interesting paper 'On the Expansion of Stone.' And the Rev. G. Tough exhibited a celestial glass sphere, containing the sun, moon, and earth, and displaying all their relative motions.

STATISTICS.

Statistics must next occupy our attention. The section was almost deserted on Tuesday, but on Wednesday it was one of the most crowded.

Wednesday.—In the statistical section, the consideration of Mr. Heywood's paper was resumed, chiefly in reference to the means of education provided for the lower classes. The small number that attended day schools (600 out of 8000) was noticed as a lamentable instance of the little that has been yet effected for the moral improvement of the country: and, it was stated besides, that the education received at these schools was miserable in amount, and bad in quality. Inquiries were made respecting the efficiency of Sunday schools, and it was stated, that they had produced most beneficial effects, both on the children and the parents. A gentleman of Manchester said, that there was a Sunday school in that town containing about 1,500 pupils, most of whom were employed in the factories, and that these children had voluntarily subscribed 150*l.* out of their little earnings in one year for benevolent purposes. Mr. Simpson said, he thought it of importance to ascertain some facts, showing how the education of children re-acted upon parents. The Rev. Edward Stanley, of Cheshire, then observed, that he had great pleasure in stating his experience respecting the indirectly beneficial effects of education, particularly with reference to the reformation more frequently perhaps than we are aware of, or they are themselves aware, upon the parents of children receiving instruction in our national or parochial schools. It has, in several instances, occurred to him to hear from their own mouths a confession of this important and gratifying fact. He might indeed add, that he knew of no instance in which the children of poor or profligate parents, if regular attendants at our schools, had not transmitted to their homes a portion of the benefit derived; and this he considered a very important result—naturally flowing from general education. It is true that he had, in too many instances, regretted to see that

† This paper being of a more popular character than any of the others, and particularly valuable when taken in connexion with our Meteorological Tables, we shall at an early opportunity give a copious abstract of it to our readers.

effects, commensurate with his wishes or exertions, were not fully developed, but he did not look upon the seed, although apparently lost in barren soil, to be altogether thrown away. At all events, he had no hesitation in saying, that we have no right to argue, from occasional disappointment, that education is either useless or impolitic. Let us look for a moment at the dense and comparatively profligate population of our manufacturing districts, and then reflect how infinitely more brutal and barbarous they would have been had not the dark scene been enlightened by, here and there, a ray of intellectual light, and the whole more or less soothed, and, in some degree, controlled by the civilizing powers of revealed religion.

The next subject to which attention was directed was to the ascertaining the proportion of comforts possessed by the operative classes. The Messrs. Taylor offered to furnish full information respecting the miners in Cornwall and Wales. A paper of Statistics, by Dr. Clelland, relative to Glasgow, was read, and led to a long discussion respecting the operation of the poor laws and Dr. Chalmers' reforms; the difficulties that impede statisticians from the present imperfect system of registration, were warmly commented upon. *It appeared that in the city and suburbs there were* 6397 *children baptized or born to Baptists, &c., and that of that number there were only* 3225 *inserted in the parochial registers, leaving unregistered* 3172. The duty of government to render registration compulsory, was forcibly urged, but Earl Fitzwilliam checked the discussion, by observing, that we were met to register what exists, not to suggest what ought to exist. In reply to a suggestion that it would be useful to ascertain the statistics of disease, Dr. Clelland said, "I addressed letters to upwards of 130 medical gentlemen in the city and suburbs, requesting that they would favour me with a note of the diseases of which their patients died during the period in which I had requested the clergyman to give me a note of baptisms, but as I only succeeded with a small portion of the members of faculty, the attempt became fruitless; and, in all probability, any future attempt will be unsuccessful till a compulsory act of the legislature, regarding parochial registers, be obtained. Amongst other reasons for not complying with my request, some of the practitioners urged that the publication of diseases would give offence to the relations of patients who died of scrofula, epilepsy, &c., and, moreover, that the publication would operate against themselves, as it would show that many of them had either very few patients or that they were unsuccessful in the curative art." With respect to the number of paupers, and their maintenance, he said, the number of paupers in the city and suburbs being 5006, and the population 202,426, there is one pauper for every $40\frac{43}{100}$.

The number of paupers being 5006, and the sum expended for their maintenance or relief 17,281*l.* 18*s.* 0½*d.*, shows the cost of each pauper to be 3*l.* 9*s.* 0½*d.* If the sum for the relief of paupers were equally paid by the whole non-recipient population, the proportion to each would be *one shilling and ninepence and a small fraction.* The sum of 17,281*l.* 18*s.* 0½*d.*, includes the entire expenditure of the out and in-door paupers, surgeons' salaries, medicines, clothing and educating children, maintaining lunatics, funeral charges, &c.

The cost of each pauper in St. John's parish is 3*l.* 8*s.* 10½*d.* The poor in that parish are maintained or relieved on the parochial system introduced by Dr. Chalmers in 1820, *i. e.* by the Kirk Session from its own resources, without receiving any part of the general assessment for the poor, although the inhabitants of St. John's parish are assessed for the maintenance of the poor generally in the same manner as other citizens.

He also added, that in the parts of Glasgow where the assessment is made on the rental, the rates had fallen within the last few years from 7½ to 4½ per cent.; and where the assessment is on all property real and personal, annually estimated, the rate per cent. had fallen from 4*s.* 6*d.* to 3*s.* 1*d.*

A letter was read from Professor Quetelet, of Brussels, expressing his regret at not being able to attend; he stated, that in a new work which he is about to publish, he has reduced the theory of population to mathematical formulæ, and that the equations by which it is represented are very similar to those that express the planetary perturbations.

On *Thursday* an account was given of the mode in which the Statistical Survey of Scotland, now in progress, was conducted. Earl Fitzwilliam suggested more minute inquiries, such as the quantity of stock and implements of husbandry possessed by each farmer, and the proportions of his tillage and pasture-ground, &c. Some discussion ensued, and the general impression was, that such minute information is unattainable.

On *Friday* Capt. Maconochie read a very able analysis of Guerry's 'Essai sur la Statistique Morale de la France,' an invaluable work, first introduced to the English public by the *Athenæum* (See No. 303).—Mr. Auldjo read a paper, 'On the Statistics of the Kingdom of Naples,' tending to prove that the prosperity of that country is increasing. After which the section adjourned.

NATURAL HISTORY.

Tuesday.—Section of Natural History, including Zoology and Botany; Professor Graham in the chair.—A report, by Mr. Jennings, on the recent progress and present state of Zoology, was read. This report, which seemed to the section most luminous, and which is not susceptible of abridgment, began by noticing the arrangements by Linnæus and his followers, and afterwards entered into the internal arrangement of animals as contained in the works of Cuvier. The first part of a paper was then read by Professor Hooker, giving an account of an excursion in Quito and Chimborazo, along with Captain Hall, and containing allusions to the state of vegetation in that neighbourhood, showing the general similarity of the climate of that district with the climate of the south of Europe, and, at the same time, the remarkable effects produced by the continuous spring of that climate, contrasted with the effects on animal and vegetable life by the alternate seasons of other climates; and a contrast drawn between the climates of high elevation in tropical districts, and the variable climates in higher latitudes, the result being in favour of the *alternation*, instead of the eternal weariness of the joys of everlasting spring. The discussion to which this paper gave rise, was principally the altitudes to which certain species of plants are confined, and the general effects of temperature.

On *Wednesday* the remaining part of the paper on Captain Hall's excursion in Quito and Chimborazo was read by Dr. Hooker. The question of the altitudes at which certain kinds of vegetation exist, gave rise to some discussion, as did that of the limit of perpetual snow, the result of which was, that theory and observation were at variance with regard to it, the geological character of the country always forming an important element in determining at what height snow may be found permanent. A gentleman rose to offer some remarks on Humboldt's isothermal lines, but, failing to catch the chairman's eye, he sat down apparently in a pet, and did not attempt to renew the subject. There was, amongst other papers, one by Mr. Brown, relative to the anomalous character of several families of plants.

On *Thursday*, Mr. Selby read a lengthened notice of the birds obtained during an excursion in Sutherlandshire, and on the structure and use of the orbital glands. Sir W. Jardine also read a paper on the various species of the genus Salmo collected during the same tour, exhibiting the specimens and drawings. On this important subject some observations were made by Mons. Agassiz and Dr. Richardson, both of whom declared that Sir William had certainly established a new species. M. Agassiz made several important remarks also on the characteristics of the species of Salmo in the Swiss lakes; we trust to give a more extended account of this curious subject on a future occasion. Mr. Trevelyan read a notice on the distribution of the phenogamous plants of the Faroe Island. A paper was read by Mr. J. G. Dalzell on the propagation of Scottish zoophytes, illustrated by many beautiful drawings. He stated that he had kept some of the zoophytes alive in his own house for several years. Dr. Arnott read a paper on the Coculus indicus of commerce. Mr. Murray made some observations on his success in cultivating Phormium tenax.

On *Friday*, Dr. Traill made some observations on a new species of thrush, found in Brabant. Mr. Pentland concluded his observations on the remains of what appeared to him to be an extinct variety of the human race, which had inhabited a district in South America, extending from the 16th to the 19th degree of south latitude. From relics found in various places, it appeared that three-fourths of the brain was placed behind the spinal column, the consequence of which conformation would be, that they would have great difficulty in keeping their heads erect, and be more inclined, as the Professor humorously observed, to be star-gazers than geologists. Mr. Pentland failed to convince the section that this conformation arose from any other source than the habits of savage life, it being well known that the form of the head is frequently altered by pressure being applied in infancy. A long and very interesting discussion ensued, but it was not easy to ascertain the names of the speakers. Some attempts were made to introduce the question of Phrenology, but the subject was manifestly distasteful to the majority. This gave offence to some of the enthusiastic votaries which this science has in Edinburgh; and they were still more annoyed when Professor Graham, in his report on the paper, gave some sly and severe hits at the phrenologists, who had actually proposed that the association should establish a Phrenological Section. Sir David Brewster gave a masterly and luminous account of a remarkable structure in the webs of the feathers of birds, for keeping the laminæ from separating during flight. This extraordinary fact, he asserted, had hitherto escaped the observation of naturalists.

CHEMISTRY AND MINERALOGY.

This section attracted less of the public attention than had been expected. Professor Hope was in its chair, occasionally relieved by Dr. Dalton. On Tuesday the only important matter brought before the section was a discussion of certain experiments made by Dr. Daubeny, on thermal waters, and the gases they evolve. (Our reports of the proceedings of the Royal Society during the past session have already furnished our readers with the most important parts of the recent information obtained on this subject. See No. 321.)

Wednesday.—Crystallography formed a prominent object of discussion. A paper of Dr. Charles Williams, on a new law of combustion, was read. Amongst other facts elicited was the following: That bodies are inflamed at a temperature as low as 35° of Fahrenheit. (A further account of this new law will also be found in a former report

of the proceedings of the Royal Society, see p. 336.) Dr. Daubeny read a paper on the relative heating powers of coal tar, and splint coal, in which he showed that the tar might be used in fuel; but that it did not give much more heat than good coal. A paper was read with regard to the destructive distillation of organic substances, a subject of vast importance, but unfortunately encumbered with technical details intelligible only to professed chemists.

Thursday.—The most important part of the business of this day was a discussion on chemical notation introduced by Mr. Johnston. The subject was referred to the committee, with the view of introducing an uniform system of chemical notation, the want of which is severely felt, and unless the evils arising from every person who deems that he has made an improvement introducing new-fangled combinations be remedied, it was generally agreed by the section, that chemical science would soon become a perfect chaos. A letter from Professor Airy of Philadelphia was read, respecting the propriety of facilitating the communications with foreigners of congenial pursuits. It was received with loud cheers, and it was observed, that no better means could have been devised for the accomplishment of this very desirable object than the formation of the British Association.

Friday.—The Rev. Mr. Harcourt, Secretary to the Association, and almost its founder, detailed some experiments of his, now in progress, on the effects of long continued heat on certain bodies, and of the disposition of them under the Iron Furnaces in Yorkshire. Professor Clerk read a paper on the use of hot air in the smelting of cast iron, and gave some numerical results of the advantage of the new process. Dr. Christison read a paper on the action of water on lead. Dr. Graham read a paper on the constitution of certain hydrated salts. Mr. Kemp read a paper on the liquefaction of gases, showing how gas may be obtained in much larger quantities than before. This paper was generally regarded as the most practically useful that had been laid before the Section.

The following is the substance of a communication made by Professor Stevelly, on applying a vernier to a scale, not of equal, but of variable parts; and particularly to the scale of Wollaston's Chemical *Equivalents*.

A series of parallelograms, whose sides diminish or increase according to *the same law* that connects the divisions of the portion of the scale which is to be read off by the vernier, being jointed together in the manner that the toy by which children make their soldiers wheel into line or form column, gives us a type of the instrument. The cross diameters always remaining parallel, can be represented by five indices, which may, by a screw similar to the one that works the small mirrors of a Gregorian telescope, be so made to recede or to approach one another as to suit the divisions of the scale at any part; and to read off a portion of any division, decimally, to any convenient number of places; the limits being much the same as those for the common vernier for a scale of equal parts.

Now, as to the lengths of the bars. Let us instance in Wollaston's scale; it is clear the length of the bars must be from centre to centre of the jointing pins, some of the very same series of geometrical proportionals as those which constitute the scale to which the names of the chemical substances are attached. The vernier, therefore, is very easily constructed by the workman. For a scale of arithmetical proportionals, the bars would require to be such, that, as the first term of the principal scale is to the first difference, so let the first bar be to the difference of first and second bar, the lengths of the bars may then be all easily found. If a vernier has to be made for thermometers graduated by the inequalities of the tube, the law must be found by the diagonal scale, or some other practical mode. It is remarkable that the common equal-sided parallelograms, similar to the toy, would in practice be *very exact indeed*, though not mathematically so.

The vernier might be easily adapted to circular arcs, as in the quadrantal balance or common yarn scale. And by this an instrument might be made useful for many hygrometric purposes. Also another instrument by which the specific gravities of large quantities of gases or of atmospheric air might be had by inspection. This might be useful both to the speculative philosopher, to the physician, to the persons at gas works, and to the manufacturing chemist.

Objections may be foreseen; but none, it is believed, without an answer.

ANATOMY AND MEDICINE.

The papers read in this Section were all of a strictly professional character, nor was there any thing popular connected with it, except the lecture delivered by Sir C. Bell on the nervous system. It continued two days, but was little more than a *resumé* of what he had previously published on the subject. At the evening meeting of Friday, the President of the medical section, Dr. Abercrombie, in reporting the proceedings of his section, took occasion to express the gratification he and his brethren had experienced from the meeting of the British Association in Edinburgh, and their anticipation of the happy results to which the friendships thereby commenced might lead. He was not one of those who were of opinion that the pursuit of physical science was hurtful to the higher interests of man considered as a moral being. He believed that infidelity and irreligion were the offspring of ignorance, united to presumption; and that the boldest researches in physical science were calculated the more to display the power, the wisdom, the harmony, and the beauty which marked the works of Him who guided the planets in their course, who ruled a thousand suns and their systems, and whose name was The Eternal.

GEOLOGY AND GEOGRAPHY.

This was the most popular of the sections, and justly so, for, in addition to the valuable information contained in the communications, the audience enjoyed the racy eloquence of Sedgwick, the humour of Buckland, and the strong sense of Lyell; no report could do justice to the speeches delivered by these eminent philosophers—we trust, however, to be able hereafter to supply our readers with an accurate report of that delivered by Professor Sedgwick on Tuesday, which was beyond question one of the most singular examples of philosophical details lucidly arranged and adorned with the most lively wit, that can be found in the annals of science. Professor Jameson took the chair at the meeting on Tuesday, and a very animated discussion arose on the subject of primary formations. It appears that at the last meeting of the Institution, Dr. Boase, Secretary of the Royal Geological Society of Cornwall, brought under the notice of the Geological department some speculations as to the stratification of primitive clay slate. Upon that occasion, it was agreed to postpone the discussion until next meeting. It was maintained by Dr. Boase, that granite displayed all the characteristics of stratified rocks, as these characteristics are enumerated by Professor Lyell. It was argued on the other hand that parallelism of layers is no proof of stratification. Dr. Lyell observed that he had not laid it down as a criterion of stratification, that tabular masses have parallel bends; the reverse was often the case. The remarks of Dr. Boase called forth a long and luminous reply from Professor Sedgwick; but the whole discussion was involved in considerable obscurity, on account of Dr. Boase's work having been so recently published, that his exact views upon the subject were not fully known to the individuals composing the meeting. Nor were they completely developed on this occasion. At the conclusion, he remarked, that had this been the case, much of the discussion might have been saved. Mr. Greenough, and Professors Phillips and Buckland severally explained their views upon the subject, but nothing of importance resulted from the discussion; indeed, misunderstanding seemed to prevail upon the subject, but this was readily pardoned, as it led to much merriment. A paper upon the Geology of America was also read to the meeting.

On *Wednesday*, Mr. Stevenson's report as to the change in the relative level of land and water, was read. This called forth some very interesting remarks from Professor Lyell (who has recently returned from a tour in Sweden). The Professor has ascertained the important fact, that the land on the coast of Sweden has, within the last hundred years, gained somewhat more than three feet (See *Athenæum*, No. 289). Other papers, chiefly geological, were read; in particular one by Lord Greenock on the coal formation and strata of Scotland; his Lordship, however, dwelt too much on generalities, and it was not possible to discover, from his account, whether there are any essential differences between the coal formations of England and Scotland.

On *Thursday*, Mr. Nicol read a paper on the subject of the structure of fossil wood, and explained the general results of his observations, and showed his method of making thin sections of fossil wood. Professor Traill read a paper on fossil remains found in Orkney, which gave rise to a very animated discussion, in which Professor Buckland took a conspicuous part. The Section resolved, if the weather should prove favourable the next day, to have a geological excursion to some of the hills near Edinburgh. This excursion was, however, undertaken only by a select few.

On *Friday* several gentlemen made important communications to this Section, amongst others, Mr. James Bryce read a notice of some bones found in a cavern near the Giant's Causeway, which seemed to prove that a geological examination of the north-east coast of Ireland would be attended with important results. A paper was also read on the geology of the Pentland Hills. Mr. Murchison read a paper on the fossil fishes found in the old red sandstone of England, and also in Forfarshire and other counties of Scotland. Dr. Traill announced that the fossil fishes which he had brought from Orkney had been that morning inspected by M. Agassiz, who had discovered among them five new species. M. Agassiz also gave an account of certain fossils found in the quarries near Burdiehouse, which he conceived at first to be reptiles; but which were in reality fishes partaking of the character of reptiles. This is a remarkable fact, brought for the first time under the notice of science.

THE EVENING MEETINGS.

The design of the meetings in the evening was to present some scientific subject in a popular form, so as to make it intelligible and interesting to ladies and ordinary visitors. On Tuesday, as we have already stated, the subject of comets was discussed. After the chairmen of Sections had reported on Wednesday, Dr. Lardner gave a lecture on Babbage's Calculating Machine. On Thursday, Professor Buckland gave an admirable lecture on Fossil Reptiles, which convulsed his hearers with laughter at some of his humorous hits; while its great research and extensive information rendered it interesting to the most sober student of science. The object of the Professor was to prove the admirable adaptation of animal life to the constitution of the globe at the various eras of its history. In what may be called the earliest periods, the animals inhabiting the

waters possessed a singular peculiarity of tail; the two parts into which we now find it divided were then of very unequal sizes, the upper one was large and the lower one small. In these circumstances the animal lived by what is vulgarly called suction. Its mouth, or rather snout, hung or dropped downwards; and as it subsisted upon decayed vegetable matter, which subsided to the bottom of the element in which it moved, the fish was, by this adjustment of parts, enabled, with the least possible exertion on the part of the animal, to suck up its nutritious aliment. As we approach to a more recent period, when it was necessary to introduce one of Malthus's checks upon population, we find the evidence of design, and the law of adaptation developing itself in a new shape: animals occur which are evidently intended to prey upon their weaker brethren of the deep, which, were they allowed to propagate themselves without restraint, would destroy that equilibrium which is observed in animal life, as well as in the laws which govern inanimate matter. It would be impossible, without a reference to the figures, to give even an outline of the various details of the Professor's lecture, and enumerate the measurements of such marine monsters as the ichthyosaurus, plesiosaurus, &c. The leading object of the lecturer we have already mentioned; the address was enlivened by various strokes of humour. In allusion to the organic remains found in Scotland, the Professor observed, that their antiquity was of a very high order, far surpassing that of the most ancient Highland family of the Isles. A number of slabs or strata of rock, he stated, had been sent to him by Mr. Duncan, who mentioned that they evidently bore the impression of the feet of a tortoise. At first Dr. Buckland doubted the fact, but was afterwards convinced. The difficulty, however, became obvious; where was the tortoise? A friend of the Doctor's, more learned on this point, he said, than himself, at once explained away the difficulty. They must, he observed, have been *Scotch* tortoises, which were travelling to the *south*. The Professor concluded by alluding to the probable age of the world. With regard to the determination of the question by the sacred writings, it must be observed, that the words, "In the beginning," &c., imply an indefinite period of time, in which geological phenomena of the most extensive description might have taken place.

On *Friday* evening Mr. Whewell delivered a lecture on several interesting phenomena connected with the tides. At the last meeting of the Association, the investigation of this subject was pointed out as of vast moment, and one from which facts of considerable importance were likely to result. He observed, that the state of information, with respect to tides, amongst philosophers, was precisely in the same situation as that with respect to the general principles of astronomy among those who were the least learned. The general fact of tides being governed by the law of gravitation and the attraction of the moon and the sun, was known to the learned, but of the particulars they were in a great measure ignorant. At the last meeting, he, therefore, called upon intelligent individuals to institute investigations upon this subject, and the consequence had been, that, at Bristol, a society was formed for the purpose of carrying on these investigations,—Bristol, which was above all other places calculated for observations, as the rise and fall of the tide averaged from fifty to sixty feet, where a person might walk at low water along the valley of the river, and see the ships lying dry, never dreaming that in a few hours these would be floated by the tide. To facilitate such inquiries, a self-registering instrument was constructed to ascertain the rate of the rise and fall of the tides; by which the relative altitudes at different times of high water were delineated on a sheet of paper, one of which was exhibited to the meeting. By this means, the fact, first developed by Newton, from observations made by a gentleman residing at the spot where this instrument was now adopted, was proved, that at one period of the year the evening tides were greater than the morning, and, at other times the morning tides were greater than the evening. This circumstance could not be observed in London; and this arose from the peculiar position of that city, which he believed to be unique in the tides of the coast. Mr. Whewell then described the manner in which tides were brought to our coast, and showed that the great tidal wave of the Atlantic in approaching the shores of England divided into three columns, and that two of them met exactly at the mouth of the Thames, one of them twelve hours after the other, so that each tide was compounded of an evening and a morning tide, and in consequence there was no alternation in the daily tides of that port. In order to prosecute the investigation of these phenomena, application was made to the Admiralty, to direct the Coast Guard Service to make observations on the subject; and the officers of that service had shown an alacrity and zeal in the matter which was worthy of their character. He had received these observations from the 7th to the 23rd of June last; but he had not yet had time to examine them fully; but from the cursory view he had been able to take of them, they appeared to be of great value, and they were at present undergoing examination by direction of the Admiralty. Mr. Whewell concluded his interesting lecture, by expressing in very warm terms the feelings of gratitude entertained by himself and other strangers of the Association for the kind and hospitable reception they had met with in Edinburgh.

Professor Sedgwick at some length, took a general review of the results of the labours of the geological and geographical sections during the week, in the course of which the learned Professor detailed the relation which subsisted between the geological formations of the sister kingdoms. Geology, he observed, had made a very important advance during this meeting, in the course of which he himself had gained new views of the science. M. Agassiz, in particular, had brought to light several interesting facts relative to fossil remains. He concluded by congratulating the Association on the countenance which had been bestowed on their meeting by the presence of so many of Scotland's daughters; and re-echoed the sentiments of Dr. Abercrombie, that the pursuits of science, instead of leading to infidelity, had a contrary tendency; it went rather to strengthen religious principles and to confirm morals.

Saturday.—Our reports have run to such an unusual length, that we must confine ourselves to a general sketch of the proceedings of this, the last day. Next week we shall have leisure to look over the whole, and fill up the outline where it may appear defective.

The Rev. V. Harcourt, general Secretary, read a report of the proceedings of the past week, and the objects to which it was desirable that the members should direct their attention during the coming year.

Thanks were then voted to the officers of the University—to the Royal College of Physicians—to the proprietors of the Assembly Rooms where the meetings were held—and to other public bodies, for their liberality and kindness. Professor Sedgwick proposed, and the Lord Chancellor seconded, a vote of thanks to M. Arago, and the other distinguished foreigners who had attended the meeting, which was received with great applause. M. Arago returned thanks in French. The President then addressed the meeting, congratulating the members on the result of their labours, and then announced that the next meeting would be held in Dublin, on the 10th of August, Dr. Lloyd, Provost of Trinity College, Dublin, to be President, Lord Oxmantown and Professor Whewell, Vice Presidents, Professors Lloyd and Hamilton, Secretaries.

FINE ARTS

Works of art lie so thick upon our table that we must address ourselves to examining them, and noting down our judgment before the task become too heavy for "a labour of love."

And first in merit as in fame, is Raimbach's splendid engraving from the 'Parish Beadle,' by Wilkie. This picture is not a favourite of ours, nor do we think it will be with the public. The subject is a painful one—but we admit that it is a scene from life, and we have rarely seen an engraving so broad and general in its effects, without losing any of the beauty of detail.

Two engravings, by Lupton, are also interesting, as they make us acquainted with what we had not known before, that Sir Thomas Lawrence attempted landscape painting; and we see further by them, that had he chosen to follow this branch of the art, he might have been successful in it. One represents a close scene in a park, with trees of profuse, sweeping foliage, and deer grazing placidly by the side of a small pool,—the other is something more ambitious in subject and effect, and reminds us of some of Poussin's poetical compositions.

A striking contrast to these is Martin's 'Seventh Plague of Egypt,' now engraved by Lupton, on a larger scale than that in which it first appeared. The designs of this splendid artist require space, and we never see one of them contracted to the puny size of an Annual page, without remembering some English Pasquin's sharp but expressive phrase of "a panorama in a pill-box." There are other works by the same hand more stupendous and imaginative than the one before us; but the original conception is here, which none of Martin's host of imitators have ever equalled.

We must make another long skip, to come from the "fire mingled with hail, which ran along the ground," to the two lithographs by Lane, after Edwin Landseer. 'High Life' is typified by a mild, aristocratic-looking deer-hound, sitting in the easy and grave consciousness of his own gentility, among all manner of suitable adjuncts—such as the hawking-glove and bells, the sword, the helmet, the old goblet, the quaintly-fashioned taper, the damask-cushioned easy chair, and the unclasped volume—a missal or ancient romance, we are sure. We should have thought the clown easier to represent than him of gentle blood—but 'Low Life' is not quite so characteristic as its companion—and the shrewd surly-looking tyke is rather homely than vulgar, and, were he sitting in any better company than a pipe and pot of porter, might pass muster. The awkward resolved position of his fore paws reminds us of the attitude of the feet of one of Thom's grotesque *images*. These plates are in some parts fine specimens of the art of lithography.

Mr. Inskipp goes on happily, and we almost think, improvingly, with his 'Studies from Nature.' Plate 4 is now before us, and a sweeter face than it represents we have rarely looked upon. There is a simplicity and *soundness* of style in these heads which please us exceedingly. —The tenth number of engravings from 'The Works of Liverseege,' is a fine one. We are sure that this work must be successful—it awakens great interest, and deep regret that so promising an artist should have been so early lost. The present number contains 'The Benediction,' 'My Lady's Page,' and 'Christopher Sly and the Hostess,' all full of truth and beauty.—The 10th Part of Engravings by Mr. S. W. Reynolds, from the works of his illustri-

ous namesake Sir Joshua, is also before us. 'The Infant Hercules' is powerfully engraved; and 'The Laughing Girl,' a sweet picture, in the artist's happiest manner.

But here are the first fruit offerings of the Annuals for 1835—'Twenty-two Illustrations of the Oriental Annual, from drawings by W. Daniell, R.A.' and 'Illustrations to Heath's Picturesque Annual, from drawings by Cattermole.' The Oriental is a decided improvement on the last year; the whole of the plates are good, but we must direct especial attention to 'The Moar-punkee, Lucnow,' and a 'View in the Garden of the Palace of Lucnow,' both engraved by Brandard, as without rivals for delicacy and effect; and to the vignette title-page, 'The Indian Fruit-seller,' by Woodman, a sweet and beautiful composition, although the neck of the girl is perhaps a trifle too long.—Of Heath's 'Picturesque' we are perplexed what to say. That Mr. Cattermole has produced some very clever pictures, and that the several engravers have done their duty, we readily admit; but why twenty illustrations of Walter Scott should form a volume of the 'Picturesque Annual,' is, we confess, beyond our power to divine. This explanation premised, there is much to admire in the work; the varied skill and power of Mr. Cattermole's pencil, which we have often before commended, and some exquisite proofs of the talent of Cousen, (the 'Best Bow' is indeed admirable, both as a picture and engraving,) Goodyear, Higham, Brandard, and others.

A lithograph before us gives a representation of a monument, in the Gothic tabernacle style, about to be erected in Bristol Cathedral, to the memory of Bishop Butler, with an inscription by Southey. There is something too perpendicular and square in the entire effect to please our taste—but it is possible that, when erected, this defect (as it appears to us) may not be so striking.

Part I. of 'Landscape Illustrations to Cunningham's edition of Burns' is also on our table. These are the vignettes and frontispieces to the several volumes of this work, collected and illustrated by a few pleasant words from the pen of its editor.

Lastly, we behold the 'Genealogical Tree of British Poets,' with Chaucer at the root, and the Corn Law Rhymer and Miss M. A. Browne on the topmost boughs; the other bards (we mean their names), filling closely the interlacing branches of this wonderful child of the forest. But let us not be thought to jest—for under the shade of this same tree there stands—the Athenæum! We feel the compliment, and are obliged for it.

MISCELLANEA

Death from the Bites of Spiders.—A letter from M. Graëlls, of Barcelona, was read at a late meeting of the French Entomological Society, of which the following is an extract: "The appearance of a spider, the bites of which gave rise to serious accidents amongst the people of *El campo de Tarragonas*, and even caused death to some of a feeble constitution, was first noticed in 1830. It attracted the attention of the Medical and Surgical Academy of Barcelona, which named a commission, to examine persons bit by this spider, and ascertain its species. Unfortunately, this last point was difficult to verify, as the country people had commenced destroying every spider they met, and could not point out that which they considered noxious. In 1833 this scourge appeared for the second time amongst the inhabitants of *El Vendrell* in the same district, producing the same accidents, and in such numbers, that the peasants dared not go out to their work. A second commission was named, of which I was one, and I ascertained that the injurious spider was the *Théridion malmignatte*, the Aran. 13-guttata of Fabricius."—In consequence of this letter, some observations were made: M. Lefebvre related, that despite all his pains, he had been unable during his sojourn in Sicily, to find either this *Théridion* or the *Tarentula*. Yet people were constantly telling him of a venomous spider, without however presenting him the animal or describing it in any precise manner. Among the strange exaggerated and contradictory reports, which were given him of the injuries it produced, as well as the proper modes of cure, he never heard of death being the result of the bite of this spider, but merely prolonged lethargies, fevers often sufficiently violent, together with shocks to the nervous system, which were generally recovered from. Thus he was told, that in harvest time, a woman of Colessano, having gone to sleep in the corn, was bit by one of these spiders in the neck, and that having become lethargic in consequence, she remained two or three days in a state of torpor, from which she was only recovered by constantly rocking her in a cradle to the sound of music. His informant was a muleteer, who said he had assisted at the dances, which they believed necessary to arouse this woman. The Sicilians designating all spiders, particularly those of the fields, by the common name *Tarentola*, brought the first they found to M. Lefebvre as specimens of the venomous species. He remarked that those presented him, were generally of the smaller kinds, not *Epeiræ*, but *Thomisi*, *Lycosæ* and *Eresi*, whence he concluded, that there might probably be a *Théridion*, the size of which, it is well known, does not exceed that of most species of the above genera. He was assured that oil and *theriacum* were generally employed with success against the bites of this spider, which was particularly dreaded in the Val di Noto, at Randazzo, a little town at the north side of Mount Ætna, and at Collesano, where they termed it *Tarentola Ballarina*.

Steam Navigation to India.—Intelligence has been received here (Alexandria, Aug. 13th), that Government had resolved to support the scheme of a steam navigation to India *via* Egypt, the Pasha, in proof of his zeal in the cause, immediately gave orders for constructing a railroad between Cairo and Suez upon the most approved plan, and as soon as the necessary arrangements for commencing the work could be made here, to procure from England the whole of the iron rail-bars, locomotive carriages, steam-engines, &c. necessary for this great enterprise. Being the first work of the kind ever attempted in this part of the world, Mehemet Ali, justly appreciating our claim to the first rank in this particular art, has resolved that English skill and English machinery alone shall be employed upon it.—*Times*.

Zincography.—It was but a few years past that we had to record an advance in the fine arts, in the invention of lithography, which afforded increased facilities in the art of engraving. Lithography is now, however, likely to be displaced, at any rate to a great degree, by the invention of an ingenious Frenchman, M. Breugnot, who has succeeded in preparing a composition of metal, the basis of which is zinc, upon which drawing and writing can be effected with equal, if not with greater facility than upon stone, and as easily applied to paper with the same machinery. The art of zincography has several advantages over that of lithography, amongst others, in the portability and comparative cheapness of the plates, over the necessary bulkiness and cost of stone. These plates can even be adapted to a lady's portfolio, to any thickness, and to any size, a desideratum much wanted in lithography. The invention of zincography has received the sanction of the Royal Academy of Paris, and we understand that M. Breugnot has sold the patent for Great Britain to Mr. John Chapman, of Cornhill, who feels confident that he shall be able to adapt this improvement to every department in the art of engraving. In Paris, they have already succeeded in printing large window blinds with one plate, and we believe experiments have been made on silk and cotton, which warrant the supposition that zincography will soon be applied in our silk and cotton printing establishments.—*Morning Herald*.

The Fine Arts in France.—Various works of art are now in course of execution at the *Ecole des Beaux Arts*, among which is a cast of the Moses of Michael Angelo, which has been brought recently from Rome. The object of the Minister of the Interior in procuring it was, that it might serve as a model for the various schools of sculpture in different parts of France, and copies on a reduced scale have been cast in bronze in order to be sent to the provincial schools and museums.

Westminster Hall.—The interior will soon appear improved, and worthy the inspection of foreigners. Instead of the rough walls, the sides will be lined with smooth freestone. The cornice, bearing portions of the shield of Richard II., by whom the hall was repaired in 1397, being in the last stage of decay, has been taken down, and an entire new stone cornice, with exact copies of the old sculpture, is to be put up. The pilasters which stood under the shields and quartering of arms are to be taken away as useless. The door on the right of the gates, which opened upon the depôt for Exchequer records, has been faced up, and a new door opened in the passage of the King's Bench Court, leading to the stairs of the tower. The doors which once stood open on each side the great entrance, have been discovered in the eastern wall, and faced over. The workmen have cut deeply into the wall to fix the facing. Most of the ancient wall seems to be not solid stone, but various materials forming a firmly-cemented substance. Stowe says, "Richard II. caused the walls, windows, and roof to be taken down and new made, with a stately porch, and divers lodgings of marvellous work, and with great costs, all which he levied of strangers banished or flying out of their countries, and who obtained licence to remain in this land by the King's charters, which they had purchased with great sums of money."—*Morning Herald*.

NOVELTIES IN LITERATURE AND ART.

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